

ORU2020

Örebro University Research Evaluation 2020

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FOREWORD

Science can only evolve through the hard work and commitment of competent researchers. High scientific quality requires the continuous maintenance of academic practices such as project seminars, internal refereeing of manuscripts and grants applications, calibration of instruments, curating of databases etc. These practices are essential at a university and are sometimes referred to as good academic housekeeping. In addition, the overall quality system in place at Örebro University entails an external review of research quality at five-year intervals.

While being developed in the present, all scientific disciplines also have strong links to past research. The long-term quality of our research is then highly dependent on the ability of university scientists to develop creative paths to the future.

The research evaluation ORU2020 has provided an excellent opportunity to reflect, in a structured manner, on the past, present and future of science at Örebro University. Discussing and writing the required self-assessments and research development strategies have certainly strengthened the collegial atmosphere and intellectual exchange at our different research environments.

The reports and recommendations provided by the external reviewers will be discussed by management teams at the school, faculty and university levels, but most importantly by our researchers themselves within their different units of assessment. Conclusions will then be drawn at all organisational levels on how best to proceed to further improve research quality at Örebro University.

I am pleased that we managed to successfully organise the research evaluation ORU2020 even with the challenges presented by the pandemic. I am grateful to all of you who have actively contributed to ORU2020, either as external reviewers, members of units of assessment, or as members of the planning and project groups, as well as to all Örebro University staff providing vital technical and administrative support.

Johan Schnürer, professor
Vice-Chancellor, Örebro University

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PREFACE

We are delighted to present the results of the research evaluation ORU2020 where leading external experts provide feedback to 30 units of assessment at Örebro University.

The major focus for ORU2020 has been to evaluate the university's research activities with a particular focus on quality and development. A planning group with representatives from each faculty, the doctoral student section and research administration, was appointed to propose the evaluation model. The planning work involved input and feedback from researchers in different environments at the university and was conducted in close contact with a central steering group, composed by university management and the deans. Quality was defined as having four components: the credibility of the research, its contribution, how well it is communicated, and how well it conforms to current ethical and practice standards. To assess development, each unit was also asked to provide a plan going forward.

Parts of the planning group, complemented with additional members with academic and administrative competence, formed the project group of ORU2020, which operated successfully although completely digitally due to the pandemic restrictions during 2020 and 2021. Appointed contact persons for each unit of assessment had direct contact with the project group and were invited to informational meetings and regularly scheduled question and answer sessions.

A self-assessment template provided a structure and facilitated self-reflection and analysis. Besides describing the research environment, each unit of assessment provided texts concerning the quality of the research and a plan for development. To aid in the analyses, basic data concerning bibliometrics, finance, and personnel was provided for each unit.

Providing useful feedback is a task that requires many skills. A reviewer must have a good understanding of the field and how quality research unfolds. Consequently, we recruited well-respected experts from around the world. To ensure that reviewers had the appropriate background, candidates were identified in collaboration with each unit of assessment. Reviewers were required to be external experts with absolutely no conflicts of interest to ensure impartiality. Furthermore, the reviewers were instructed to work as "critical friends" in evaluating a unit. This means that, like a good friend, they should strive to help the unit find an excellent path for development by pointing out weaknesses and strengths and suggesting possible avenues forward.

An important part of the evaluation process was the meeting of external reviewers (in small, designated teams) with representatives from each unit of assessment. Prepared with the basic data and the self-assessment, the reviewers could learn more about the unit and discuss their plans for development. Reviewer teams worked to formulate their evaluation via a template and the impressive results are presented in this report.

On the behalf of the project group, we would like to thank all units of assessment, reviewers, staff, and researchers for their cooperation in this undertaking. It is our hope that the evaluation process and the resulting reviews will inspire the further development of excellent quality research at Örebro University.

Örebro in September 2021

Steven J. Linton

Chair of ORU2020

Lavinia Gunnarsson

Coordinator of ORU2020

PART 1: INTRODUCTION

Örebro University Research Evaluation 2020

About Örebro University

Örebro University (ORU) was awarded university status in 1999 and has continuously developed highly regarded academic degree programmes and research. Despite its youth, ORU is ranked in the top 400 by the Times Higher Education World University Ranking and is placed as number 75 among world universities 50 years or younger.

Our vision, *Örebro University – leading towards a knowledge-driven society*, emphasises the university’s ambition to continuously develop and contribute to solving societal challenges. The current areas of development are: outstanding research, high-quality education, competence management and sustainable leadership, effective and smart working methods, and positioning and relations, as listed in the university’s vision and mission statement 2018-2022 (Appendix 1).

ORU has about 16,000 registered students, 480 doctoral students, 80 degree programmes, and 980 single courses. It comprises 3 faculties and 8 schools and employs 900 teachers and researchers, 60 of which hold career-development positions, 140 professors and 400 administrative, technical and library staff. The total number of staff is about 1,650.

Research revenues at Örebro University were SEK 543 million in the year 2019 (see Figure 1), of which almost 20 million was ALF funding¹ and 202 million was external research funding

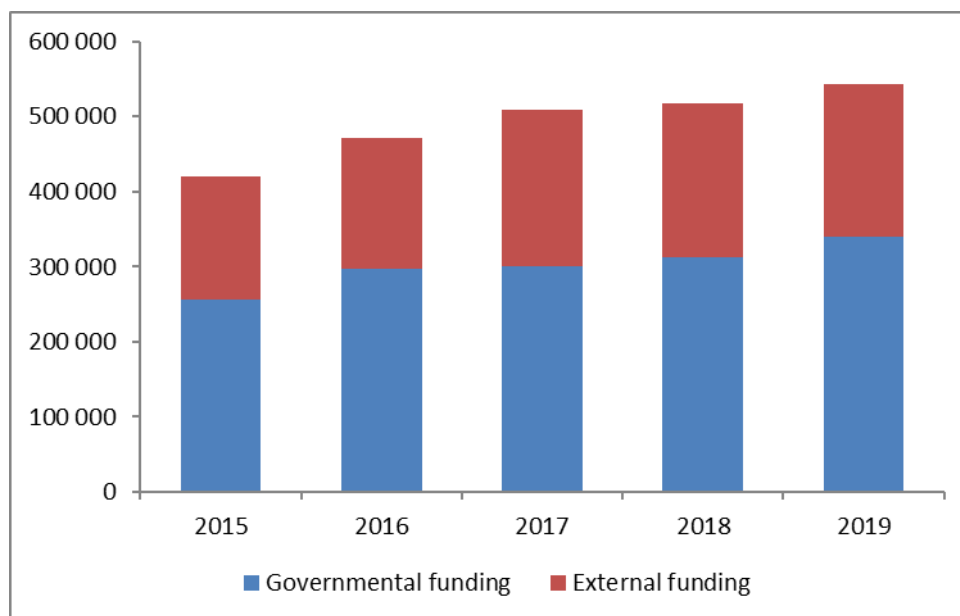


Figure 1. Research revenues (kSEK) at Örebro University 2015–2019. Source: Unit4 ERP.

¹ Higher education institutions with a medical faculty receive so called ALF funds from the government that are then transferred to the county councils within the framework of the ALF agreement, as a compensation for using regional facilities and personnel. ALF is the Swedish abbreviation of “Avtal om läkarutbildning och forskning” (Agreement on medical education and research). This is an agreement between the government and seven regions (county councils) concerning their contribution to the training of medical students, to clinical research, and in the development of health and medical care.

from different funding bodies. Research, including doctoral education, constituted 37 per cent of the university's total annual turnover.

Organisational structure of the university

Örebro University's board is chaired by the former head of the Swedish Higher Education Authority (Universitetskanslersämbetet), Professor Lars Haikola. The Vice-Chancellor, Professor Johan Schnürer, the Deputy Vice-Chancellor, Professor Anna-Karin Andershed, and the University Director, Louise Pålson constitute the university management team. Three pro-vice-chancellors have been appointed by the vice-chancellor for coordinating strategic areas of specific interest – Artificial Intelligence and Innovation, Internationalisation and Infrastructure, as well as 'Food and Health'.

There are three faculties at ORU: the Faculty of Business, Science and Engineering (ENT), the Faculty of Humanities and Social Sciences (HS), and the Faculty of Medicine and Health (MH) (see Figure 2). Each faculty, and its faculty board, is headed by a dean, who reports to the vice-chancellor.

The deans and the faculty boards are responsible for the quality of research and education within their respective faculty. Furthermore, the faculty boards decide on the distribution of about 70 per cent of the university's government research funding. A large portion of that is used to fund the professors' time available for research, ranging between 40 and 70 per cent.

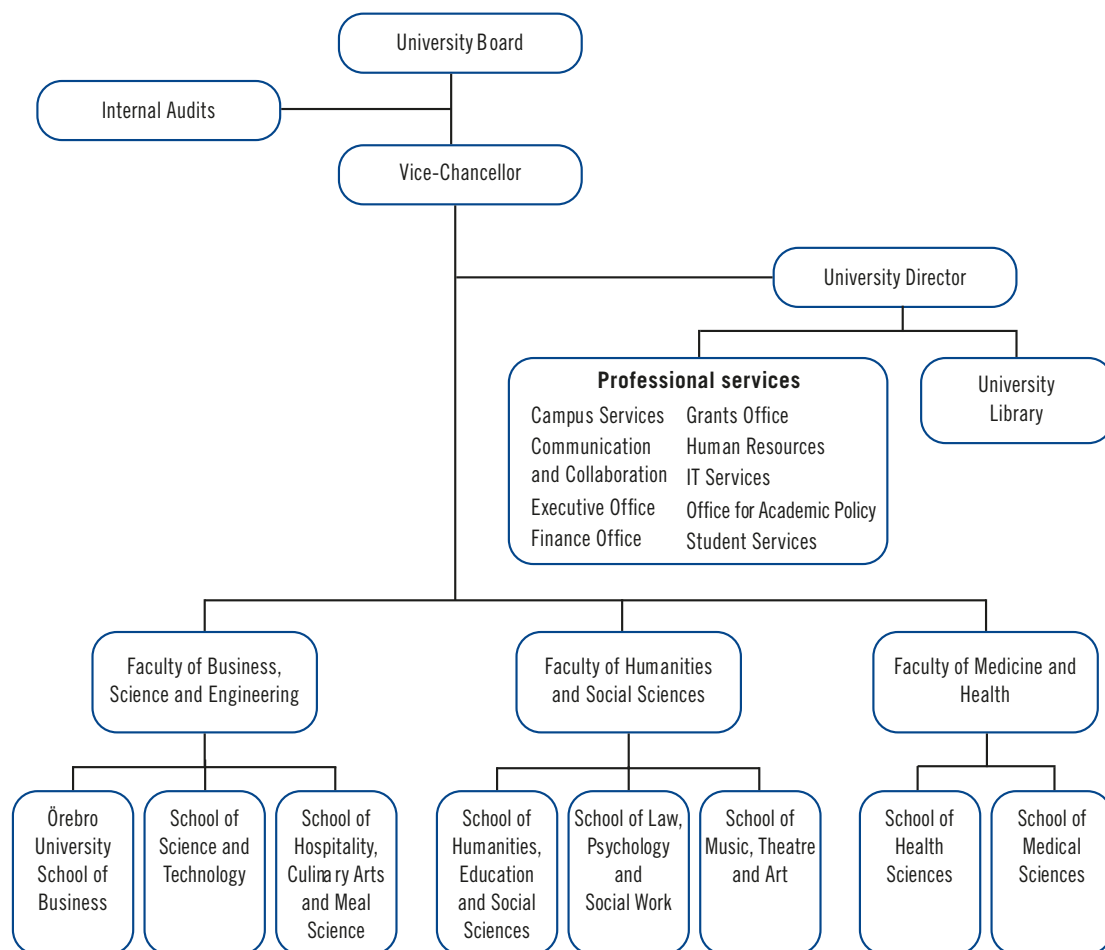


Figure 2. Organisation and governance at Örebro University.

The activities within education and research are organised in eight schools, each led by a head of school. Each school is organised in divisions, structured according to the content and extent of its activities. The divisions are led by appointed heads of division, who are members of the faculty and hold this fixed-term assignment as part of their working hours. The head of subject is another type of assignment at the school level, which, however, does not entail staff management responsibilities employer responsibilities for the staff. The heads or subject are appointed by the faculty boards to lead the quality assurance and development of the research, as well as the doctoral education within each subject.

The university administration provides professional support and services to faculties and schools. The Grants Office provides support for researchers to maximise the outcome of their grant proposals for external funding. This is done by providing long-term planning and strategies for funding applications, quality control, advice, and project management support, from planning of a grant proposal until the completion of the research project. The university's holding company oversees the utilisation and commercialisation of ideas and innovations. It is owned by the Swedish government but is managed by Örebro University.

Academic focus of the faculties at Örebro University

Faculty of Business, Science and Engineering

This faculty is organised in three schools: The School of Business, the School of Science and Technology, and the School of Hospitality, Culinary Arts and Meal Science. Research is conducted in artificial intelligence and autonomous systems; engineering, the environment and sustainable development; life science; information system capabilities and limitations; organisational, social, ethical and economic aspects of organisational control; applied policy-oriented empirical research in economics; statistical method development in survey methodology and econometrics; sensory and meal science. A range of courses and study programmes at the undergraduate and master's levels are offered in these areas. Furthermore, interaction with the private sector is strong, especially in business administration, informatics, computer science and engineering.

Faculty of Humanities and Social Sciences

Research and education in humanities and social sciences are organised in three schools: the School of Humanities, Education and Social Sciences, the School of Law, Psychology and Social Work, and the School of Music, Theatre and Art. These schools include several disciplines, ranging from musicology, through history, languages, human geography, and political science, to law, and social work. Strong professional degree programmes are offered by each school, for example in clinical psychology, law, teacher training, public administration and management. There is also a bachelor's programme in musical interpretation. Research within humanities and social sciences concerns human behaviour, the communication medium and organisation over time and space. The research provides national and international contributions of relevance to society.

Faculty of Medicine and Health

The faculty comprises two schools: the School of Health Sciences and the School of Medical Sciences. These schools cover teaching and research in areas such as medicine, biomedicine, nursing and caring sciences, occupational health, and sports sciences. The main focus is on professional degree programmes and related clinical sciences. There is strong collaboration with Örebro University Hospital and other health care providers in the region. The research focuses on common medical conditions and spans the entire field from a basic understanding of pathological mechanisms to patient-oriented research to enable the development of health care.

Current research initiatives

In order to further develop and shape research at ORU, a number of extensive investments are currently being financed with the university's "*myndighetskapital*" (previously unspent funding) and government research funding.

During 2018–2022, a large interdisciplinary research effort in the focus area *Food and Health* is undertaken at Örebro University. The initiative is managed by an appointed pro-vice-chancellor and involves the bulk of food and nutritional research at the university. The general goal of the *Food and Health* programme is to substantially contribute to better health and well-being of targeted groups of subjects/consumers by producing beyond state-of-the-art interdisciplinary research within the field of food, nutrition and lifestyle. Within this objective, the sustainability of the food value chain, from production to consumption, is regarded as pivotal. Since December 2020, Örebro University coordinates one of four national research centres for sustainability and competitiveness in the food system, called PAN Sweden (Plant-based proteins for health and wellbeing).

Teacher education for tomorrow is a strategic initiative at Örebro University between 2017 and 2021. The aim is a qualitative development of our teacher education programmes, enabling them to meet current and future needs and quality demands. The vision is to develop challenging study programmes in a stimulating learning environment that attract motivated students. Parts of the investment focus on research relevant to schools and teacher education, including practice-based research.

As part of the university's work with strategic and long-term talent management, investments are made in regard to both doctoral students and associate senior lecturers. An example of doctoral student initiatives is the multidisciplinary research school *Successful Ageing*, which, together with a second research school, *Newbreed*, partly funded by the European Commission, constitutes an environment with around 30 doctoral students who focus on studying various aspects of healthy and prosperous ageing. As an investment in the '*Research leaders of the future*', the university has simultaneously recruited about 20 associate senior lecturers, distributed across all schools, providing excellent conditions for their growth as scientists, including a fellowship development programme.

Long-term and extensive investments in *research infrastructure* are being made in order to strengthen the conditions for successful research. One type of investment includes research equipment in the form of instrumentation and equipment, e.g., cutting-edge fMRI and state-of-the-art equipment for analytical chemistry. A second type of investment focuses on data: storage media for 'Big Data'; acquisition, access to or self-establishment of databases; certain types of software; as well as a number of new positions as data management specialists.

The research evaluation ORU2020

The Swedish Higher Education Authority (UKÄ) has recently had their government mandate extended to also include the review of the processes for quality assurance of research at Swedish higher education institutions (HEIs). An evaluation model has been prepared and a pilot evaluation carried through. Under the auspices of the Association of Swedish Higher Education Institutions (SUHF), HEIs have, as part of this process, drawn up a common framework for quality assurance and quality enhancement of research. Under this framework, periodic reviews of research at an HEI constitute a fundamental component in the HEI's research quality system.

The main purpose of Örebro University's research evaluation, ORU2020, is to evaluate the quality of the research conducted at Örebro University and to identify, by focusing on

strengths and weaknesses within the university's research, both opportunities and needs for quality enhancement.

Two previous research evaluations, [ÖRE2010](#) and [ORU2015](#), have been conducted. Unlike those, ORU2020 does not aim to grade research quality, or to directly affect resource allocation. Comparison between different environments is accordingly not the purpose as research environments differ in terms of their traditions, cultures and preconditions. Instead, ORU2020 evaluates research quality, with a particular focus on the potential for development of future research of the highest quality.

The evaluation model

First, a planning group was formed with representatives from each faculty. The group conducted a thorough planning of the evaluation model, in close contact with a steering group (see Appendix 2). Once the model was set, a smaller project group (see Appendix 2) was in charge of coordinating all of the evaluation-related activities.

Units of assessment and the evaluation data

The research at Örebro University was divided into 30 units of assessment (UoAs) (see Appendix 3), as proposed by the deans and formally decided by the vice-chancellor.

For each UoA, the following data were used for the evaluation:

Quantitative indicators (see Appendix 4)

Staff details, research resources and bibliometrics (some units chose to include a limited number of publications for a qualitative assessment).

Self-assessments prepared by each UoA (see template in Appendix 5)

The self-assessments include the units' descriptions of their research environment and performance, and their own reflections on quantitative indicators and other aspects that may impact research quality. Finally, and very importantly, the units present a development plan for their future research.

External reviewers and the evaluation work

External reviewers, one per UoA, were recruited, and nine review teams were formed, each team being responsible for 3–4 UoAs (see Appendix 6). The reviewers in each team collaborated to assess the UoAs for which they were responsible, each reviewer being the main reviewer of one UoA, and co-reviewer of the other 2–3 UoAs.

The specific time plan for the evaluation work was:

- 8 March 2021: The quantitative data and self-assessments were made available to the review teams, for some units also full-text publications.
- 19–22 April 2021: Review team meetings
- 21 May 2021: Review teams' first version of reports was sent to UoAs for checking of facts and reply to questions.
- 4 June 2021: Feedback from UoAs was sent to reviewers.
- 18 June 2021: Final review reports were submitted.

Based on the evaluation data, the reviewers:

- Assessed the quality of each unit's research and research environment.
- Assumed the role of a 'critical friend' to help the UoAs to develop. First, this was done by pointing out the strengths that had been identified, and how these can be further improved. Second, as 'critical friends' the reviewers also articulated needs and offered direction for quality development and suggestions for how such a scenario might be accomplished. The plans for development provided by each UoA were considered in relation to the strengths and weaknesses that had been identified.

Meetings between the review teams and the UoAs presented an opportunity for reviewers to collect further information and obtain any clarifications needed. The UoAs also had a chance to add explanations and submit comments to the assessment. Due to the COVID-19 pandemic, these meetings took place via Zoom, on 19–22 April 2021. Besides meeting the UoAs, each review team had allocated time to commence the joint assessment and to outline the evaluation response. At the end, the reviewers also had a meeting with the management team for Örebro University including the pro vice-chancellors and the deans. See appendix 7 for more information about the digital review meetings for ORU2020.

Each review team delivered review reports for their assigned 3–4 UoAs, according to the template provided (see Appendix 8). The main reviewer for each UoA was responsible for writing the report for that unit. Before the review reports were finalised, each UoA had the opportunity to provide feedback on their specific report to resolve any misunderstandings.

The review reports were made available via the university's intranet in June 2021 and can also be found in part two of this ORU2020 report.

Örebro University – leading towards a knowledge-driven society



Areas of development and strategic goals

OUTSTANDING RESEARCH

Our researchers work in strong environments with good infrastructure and international networks. Through cooperation they develop their scientific fields and contribute to meeting challenges facing society and sustainability.

Research groups with development potential have grown into strong research environments.

The external research funding has doubled.

Our achievements are reflected by the University climbing in internationally recognised rankings.

HIGH-QUALITY EDUCATION

All our first to third-cycle courses and study programmes maintain high quality.

Active researchers are involved on all courses and study programmes at all levels.

All courses and study programmes are characterised by actively developed pedagogy, professional relevance, internationalisation, student influence and creative learning environments.

The Bildung perspective is integrated on all our courses and study programmes.

COMPETENCE MANAGEMENT AND SUSTAINABLE LEADERSHIP

Our staff reflect society's diversity and we have a high proportion of internationally recruited researchers and teachers.

A considerable number of junior researchers have been recruited, both nationally and internationally, to the University and taken part in an attractive career development programme.

Our working environment is characterised by active employeeship, which is built upon high, mutual expectations between managers and members of staff.

It is an appealing endeavour to be a manager and leader at Örebro University.

EFFECTIVE AND SMART WORKING METHODS

Every staff member's competence and time are utilised in an effective and respectful way.

We pursue digitalised operational development.

We learn across organisational and professional boundaries.

Our support functions are of high quality, effective and create value for our core operations.

POSITIONING AND RELATIONS

We are a credible contributor to public debate.

We develop knowledge-driven partnerships and strategic collaborations for mutual benefit.

We have an increased presence in national and European research policy agencies.

Our courses and study programmes are the first choice for new students and we have life-long engagement with our alumni.

Core values and mission statement

› SCIENTIFIC RIGOUR › DEDICATION › PARTICIPATION

ÖREBRO UNIVERSITY conducts internationally competitive research and offers professional degree programmes that are among the best in the country.

ÖREBRO UNIVERSITY combines, with the pursuit of Bildung at its core, a broad range of disciplines with expertise in teaching and research.

ÖREBRO UNIVERSITY is a sought-after and dedicated player in society that, together with others, promotes action in support of the global goals for sustainable development.



ORU2020 Project Organisation

Steering group	Johan Schnürer, vice-chancellor Anna-Karin Andershed, deputy vice-chancellor Louise Pålsson, university director Karin Hedström, dean ENT faculty Thomas Denk, dean HS faculty Kerstin Nilsson, dean MH faculty Mia von Euler, dean MH faculty (as of 1 August 2020)
Planning group	Steven Linton, senior professor, chair of planning group Ylva Uggla, professor, representative HS faculty Ann Quennerstedt, professor, representative HS faculty Lars Hultkrantz, professor, representative ENT faculty Tuulia Hyötyläinen, professor, representative ENT faculty Johan Jendle, professor, representative MH faculty Mats Eriksson, professor, representative MH faculty Sara Thunberg, representative doctoral student section Sofia Sjödin, analyst, Office for Academic Policy Lavinia Gunnarsson, research coordinator, Executive Office
Project group	Steven Linton, senior professor, chair of project group Lavinia Gunnarsson, research coordinator, Executive Office, coordinator of ORU2020 Ann Quennerstedt, professor Åke Strid, professor and pro vice-chancellor Sofia Sjödin, analyst, Office for Academic Policy Per-Otto Emilsson, controller, Office for Academic Policy Helena Hansson-Nylund, project coordinator, Grants Office



Units of Assessment – ORU2020

as per vice-chancellor's decision ORU 1.3-00394/2020

Faculty of Business, Science and Engineering

Biology
Business Administration
Chemistry
Computer Science
Construction Engineering
Culinary Arts and Meal Science
Mathematics, Science and Technology Education
Economics and Statistics
Informatics
Mathematics and Physics
Mechanical Engineering

Faculty of Humanities and Social Sciences

Criminology
Education
Gender Studies
Human Geography
Legal Science
Media and Communication Studies
Musicology
Political Science, including Social Studies Education
Psychology
Social Work
Sociology
Studies in the Humanities

Faculty of Medicine and Health

Biomedicine
Disability Research
Medicine
Nursing Science
Occupational Therapy
Sport Science
Surgical Science

Description of quantitative indicators – ORU2020

Resources

The data was extracted from the university's financial systems in the summer of 2020. For each unit of assessment (UoA), a financial report was generated. The report describes the UoA's research expenses for 2015–2019.

Three different types of funds are reported:

- Government funding (*statsanslag*): Direct government funding.
- External grants (*externa medel*): Funds for research applied for in competition
- Fee revenues (*avgifter*): Income from, for example, rentals and commissioned research. Fee revenues are thus external funds that have not been applied for in competition. This includes e.g. contract research.

Individual scholarships are not part of the university's financial system. Each UoA was therefore given the opportunity to provide details of scholarships to be included in the report. This has resulted in an additional report including scholarships for some of the UoAs. In those reports, the scholarships are listed as a part of the external grants.

Personnel data

For each unit of assessment, a list of personnel employed on 31 December 2019 was extracted from the university's personnel data system. All employees holding a PhD degree were included. All doctoral students were also included, regardless of type of funding. The list also includes the number of qualifications (doctorate and licentiate) awarded for each unit of assessment during 2015–2019.

No names were included in the lists. Only data such as position, gender, year of birth, employment status and scientific qualifications (docentship) and year of doctoral degree qualification.

Docent is an academic title indicating the person has reached a scientific and teaching competency level clearly exceeding that which is required for a doctoral degree. Each faculty board has an academic appointment committee which handles docent applications prior to a decision by the faculty board. An individual appointed as docent can function as principal supervisor of doctoral students.

Affiliated researchers were also included. An affiliated researcher is associated with the university, but without an employer-employee relationship between Örebro University and the affiliated researcher. Through affiliation, a researcher is engaged by the university for the purpose of developing research and education in a way that is beneficial to both parties.

Research staff categories

Professors – a professor spends the bulk of their working hours on research. The professor is also expected to be involved at all three levels of higher education and to disseminate information on and be involved in external collaboration regarding their own and the division's research activities.



Adjunct professors - an adjunct professor at ORU has their main employment (at least 51 per cent of a full-time post) outside the higher education sector.

Visiting professors – a visiting professor is employed at another higher education institution, in Sweden or abroad, but also has an employment at ORU for a limited period of time.

Senior professors – a professor that has continued their activities as an employee after retiring. Professors at ORU retire from their posts no later than when they reach 67 years of age. Appointment as senior professor allows a professor to continue as an employee at ORU after the age of 67. This category differs from the status as professor emerita/emeritus, who no longer has an employment, but can still be active in the research.

Senior lecturers - a senior lecturer has a PhD and is expected to spend their working hours on education at all levels, as well as on research and any associated collaboration activities. Most of the research activities require external funding.

Associate senior lecturers – an associate senior lecturer has a PhD and is employed for four to six years. The purpose is to enable the development of research autonomy and a strong research output, as well as the teaching qualifications required for appointment to a permanent position as senior lecturer.

Adjunct senior lecturers - an adjunct senior lecturer is a specialist/expert with research/artistic qualifications who agree to work part-time at the university for a limited period of time.

Postdoctoral researchers - the appointment as a postdoctoral researcher is intended to enable persons who have recently been awarded their PhD, to consolidate and develop primarily their research/artistic skills.

Researchers - the researcher category is used for appointments of PhDs that are mainly funded by external research grants.

Doctoral students – beside those doctoral students employed at the university, ORU has a high number of doctoral students that are admitted to doctoral courses and study programmes at the university but are employed either at other HEIs or in the public or private sectors. This is of particular importance for medicine and the nursing sciences.

Bibliometrics

Publication and citation traditions differ between disciplinary research domains and research subjects. The purpose of ORU2020 is not to compare the units of assessment with each other, but to obtain an as adequate overall assessment of their research as possible. The units were thus asked to choose which type of bibliometric indicators and what types of publications should be included in the bibliometrics to best suit their subject (while also considering feasibility).

The bibliometric data for ORU2020 reflects research output in 2013–2019 for those employed at the unit of assessment on the date of the personnel count (31 December 2019), regardless of who their employer was at the time of publication. The basis for the analyses was the data registered in DiVA, the university's repository of all publications issued by its employees, on 1 September 2020.

Bibliometric reports were created for all UoAs with the help of staff at Örebro University Library. The exact methodology applied for the bibliometrics was explained in each report. Also, the list of publications used for the analysis was made available for each UoA. Some UoAs chose to include a limited number of full publications for a qualitative assessment. These publications were made available to the reviewers in full text as separate PDF files.



ORU2020 Self-Assessment Template

This self-assessment document is intended to provide an overview of the research environment, the quality of research and the development plan for each Unit of Assessment (UoA).

Unlike ÖRE2010 and ORU2015, ORU2020 will not result in any form of grading, nor does it directly affect resource allocation. Comparison between different environments is not a direct purpose – particularly since research environments vary in terms of their traditions, cultures and preconditions. Instead, the goal of ORU2020 is to evaluate research quality and by means of the UoA's reflections on strengths and weaknesses inform the future development plan of the UoA, including any sub-units.

Each UoA will have to identify its own strengths, weaknesses and areas for development by analysing the current research environment and research quality. This will be done by engaging both researchers and PhD students in the work with this self-assessment. Some data, concerning bibliometrics, research funding and personnel, is provided whereas other data will have to be collected by the UoA in the best possible way.

This self-assessment is a key document in ORU2020 and the development plan for the UoA is a very important part. A panel of external reviewers assigned to each UoA will examine the self-assessment and the materials provided by ORU (bibliometrics, resources and personnel) in order to provide feedback. This feedback (from external peers) is intended to contribute to the further development of quality enhancement and quality assurance procedures at all levels of the university.

The self-assessment has the following main sections:

1. The unit's research environment
2. Quality of the research
3. Development plan for the UoA

Each UoA is asked to fill in all sections. It is the responsibility of the appointed UoA Coordinator to lead and document the strategic discussion needed to fill in sections 1–3 of this document and to submit the entire Self-Assessment.

Please note that this document will not be included in the final report of the research evaluation ORU2020 but it should be seen as a public document.

The self-evaluation document should be concise. The total number of words is expected to vary depending on the size of the UoA and the number of potential sub-units, but it should not exceed the total number of words indicated for a particular section.

Name of the UoA	
Appointed UoA Coordinator	
Coordinator's e-mail	
Describe briefly who has been engaged and how the work with this self-assessment has been carried out	



1. The unit's research environment

1.1 Describe how the UoA is organised in terms of:

- *Sub-units/links to external organisations etc.*
- *Formal leadership (board, head[s], director[s] etc.)*
- *The extent of teaching responsibilities at both undergraduate and graduate level.*

1.2 List the UoA's main area(s) of research

1.3 Reflective analysis of the unit's research environment

Identifying whether current structures and processes create good conditions for high-quality research is an important step in this self-assessment. You are therefore asked to reflect on a number of relevant factors below.

1.3.1 Personnel and recruitment

- *How are you currently working to ensure your personnel and recruitment efforts contribute to high-quality research?*
- *What strengths and weaknesses do you see in your current personnel and recruitment strategy?*
- *How are equal opportunities, with regard to gender, ethnicity and age, ensured in matters relating to personnel and recruitment?*
- *Here you should also include reflections on career support and the development of competence.*

1.3.2 Leadership

- *How are you currently working to ensure that the leadership of your UoA contribute to high-quality research? Describe how the academic research leadership and the formal leadership (head of division and head of school) ("enhetschef" and "prefekt", in Swedish) affect this work.*
- *What strengths and weaknesses do you see in your current leadership strategy?*
- *How are equal opportunities, with regard to gender, ethnicity and age, ensured in matters relating to leadership?*



1.3.3 Academic culture

- *How are you currently working to nurture a culture that is conducive to high-quality research? (e.g. with regard to open and respectful intellectual interaction, internal and external peer review, collegiality, creativity, ambition, freedom to define your research area etc.?)*
- *What strengths and weaknesses do you see in your current strategy for academic culture?*
- *How are equal opportunities, with regard to gender, ethnicity and age, ensured in matters of academic culture?*

1.3.4 National and international collaboration

- *Describe your main collaboration partners, in the context of development of the UoA.*
- *What procedures are currently in place to establish and maintain both national and international collaborations and networks that contribute to high-quality research?*
- *What strengths and weaknesses do you see in your current collaboration strategy?*
- *How are equal opportunities, with regard to gender, ethnicity and age, ensured in collaborations?*

1.3.5 Research funding

- *Please comment on the data provided regarding your current funding situation, including the balance between internal and external funding. Please describe your current strategy for research funding (at the UoA and/or sub-unit level) and how this contributes to high-quality research.*
- *What strengths and weaknesses do you see in your current strategy?*
- *How are equal opportunities, with regard to gender, ethnicity and age, ensured with your current strategy for research funding?*

1.3.6 Publications

- *Comment on your research output based on the provided bibliometric data.*
- *Are there any noticeable changes over time?*
- *What strengths and weaknesses do you see in your current publication strategy?*
- *How are equal opportunities, with regard to gender, ethnicity and age, ensured in your publication strategy?*

1.4 Research productivity

- *Comment on data provided for your UoA concerning the research funding available and the research output.*
- *Describe differences between perceived time³ and actual allocated time for research and how these differences may vary between gender and academic level.*
- *Describe how the time allocated for competency development is used in general terms for research purposes.*

1.5 Strategic support from the university, if applicable

- *Describe how you have been able to utilise any of the university's research initiatives (e.g. after ÖRE2010, after ORU2015; Food and Health, Associate Senior Lecturers, Successful Ageing, Newbreed, research infrastructure initiatives 2017 and 2018, Senior Lecturers specialising in teaching and learning in HE, research within Teacher Education for Tomorrow etc.).*

2. Quality of research

Although the quality of research is somewhat difficult to define concretely, it is related to four main aspects. These emerged from a study that has examined quality with a view to create a multidisciplinary understanding of the generic dimensions of the quality of research in practice (Mårtensson et al., 2016⁴). ORU2020 utilises this approach and features the four aspects: the credibility of the research, its contribution, how well it is communicated, and how well it conforms to current standards. This section provides an opportunity for the UoA to reflect on the present status of its research in terms of these four aspects of quality.

2.1 Credibility

This is a cornerstone of research quality that focuses on rigor, consistency, coherency and transparency to produce credible, reliable and valid findings.

- *Describe how research credibility is shown in the UoA's research activities and output during 2015-2019 (e.g. high-impact publication, external research funding, invited keynote lectures, international commissions of trust or other measures of credibility in your area).*
- *Consider your strengths and weaknesses.*

³ Please collect within the UoA the data needed to evaluate the time researchers in the UoA perceive that they actually have for their own research.

⁴ [P. Mårtensson et al. / Research Policy 45 \(2016\) 593–603](#)

2.2 Contributory

This refers to the contribution of the research to the literature, the field, and society (forskningens bidrag till det egna fältet/området men också till samhället i övrigt, in Swedish).

- *Describe the main contributions from the UoA's research during 2015-2019 to the literature, the field or society, including originality, relevance and generalisability/transferability of the research.*
- *Comment on the UoA's other academic contributions (i.e. editorial work, peer review, research assessment, etc.).*
- *Consider your strengths and weaknesses.*

2.3 Communicable

This aspect concerns knowledge transfer (including "tredje uppgiften", in Swedish). It has to do with how accessible and understandable the research is, and how well the results reach various communities (research, professional and lay) not least the research-teaching link. In a broad sense, communicability deals with the impact of the research.

- *Describe which communities (academia, public sector, trade and industry and/or society as such) the UoA aims to impact, how well the research reaches these intended communities and how the transfer of knowledge is reflected (i.e. by citations, use in professional or educational contexts, keynote or expert assignments, media presence, or other measures applicable to your field)*
- *Consider your strengths and weaknesses.*

2.4 Conforming

Quality research should conform to certain standards in terms of ethics, regulations, sustainability and morals.

- *Describe how the UoA works to ensure that the research conducted within the unit aligns with ethical and other standards and regulation.*
- *Describe how doctoral students develop knowledge about ethical and other standards and regulations.*
- *Consider your strengths and weaknesses.*



3. Development plan for the UoA

Because future development is a central part of ORU2020, this section provides an opportunity to describe the capacity that your UoA has for maintaining and enhancing quality research. While sections 1 and 2 focused on what has been accomplished over the past five years and on your current situation, this section is concerned with development potential, i.e. what might be accomplished in the next five years. Such a plan underscores the UoA's capacity for development by outlining strategies of why and how the plan will lead to advancements. Development is not simply doing "more" research. It involves a vision for using the current situation (for your UoA) as a platform and planning for future activities that will enrich the quality of the research.

Describe your development plan for the UoA for the upcoming five-year period. This might include specific plans for each sub-unit. Focus on areas in need of development identified in sections 1 and 2 as well as any other areas with potential for further development, underscoring each point's priority. Indicate what support (internal and external) is needed in order to realise the plan.

3.1 The vision

Describe the vision for the UoA and/or its sub-units in five years.

What would you like to maintain and what would you like to improve/develop?

3.2 The plan

Describe how you plan to realise the vision.

Please use the same structure as in 3.1 above.

3.3 Support needed to realise the plan

Describe the support (internal and/or external) needed to realise the plan.

Please use the same structure as in 3.1 and 3.2 above.

Review teams and reviewers ORU2020

Review team 1

Unit of Assessment	Main reviewer
Education	Professor Roger Säljö, University of Gothenburg, Sweden
Gender Studies	Professor emerita Harriet Silius, Åbo Akademi University, Finland
Mathematics, Science and Technology Education	Senior Professor Ulla Runesson-Kempe, Jönköping University, Sweden
Media and Communication Studies	Doctor Magda Pieczka, Queen Margaret University, UK

Review team 2

Unit of Assessment	Main reviewer
Culinary Arts and Meal Science	Professor Christian Fuentes, University of Borås, Sweden
Musicology	Professor Alexandra Kertz-Welzel, Ludwig-Maximilians-University, Germany
Studies in the Humanities	Professor Otto Fischer, Uppsala University, Sweden

Review team 3

Unit of Assessment	Main reviewer
Criminology	Professor Marie Torstensson-Levander, Malmö University, Sweden
Human Geography	Professor emerita Kajsa Ellegård, Linköping University, Sweden
Legal Science	Professor Xavier Groussot, Lund University, Sweden
Political Science, including Social Studies Education	Professor B. Guy Peters, University of Pittsburgh, USA

Review team 4

Unit of Assessment	Main reviewer
Computer Science	Professor Luigia Carlucci Aiello, Sapienza Università di Roma, Italy
Construction Engineering	Professor Folke Björk, KTH Royal Institute of Technology, Sweden
Mechanical Engineering	Docent Kristina Wärmefjord, Chalmers University of Technology, Sweden

Review team 5

Unit of Assessment	Main reviewer
Business Administration	Professor Sven Modell, The University of Manchester, UK
Economics and Statistics	Professor Niels Haldrup, Aarhus University, Denmark
Informatics	Professor emerita Anne Persson, University of Skövde, Sweden

Review team 6

Unit of Assessment	Main reviewer
Biology	Professor Deborah Power, University of Algarve, Portugal
Chemistry	Professor Leif Bülow, Lund University, Sweden
Mathematics and Physics	Professor Stig Larsson, Chalmers University of Technology, Sweden

Review team 7

Unit of Assessment	Main reviewer
Psychology	Professor Christopher Eccleston, University of Bath, UK and Professor Philip Hwang, University of Gothenburg, Sweden
Social Work	Professor Birgitta Langhammer, Oslo Metropolitan University, Norway
Sociology	Professor emerita Hedvig Ekerwald, Uppsala University, Sweden

Review team 8

Unit of Assessment	Main reviewer
Disability Research	Professor emerita Karin Sonnander, Uppsala University, Sweden
Nursing Science	Professor Bjöörn Fossum, Sophiahemmet University, Sweden
Occupational Therapy	Professor Anders Kottorp, Malmö University, Sweden
Sport Science	Professor Douglas Booth, Thompson Rivers University, Canada

Review team 9

Unit of Assessment	Main reviewer
Biomedicine	Senior Professor Lars Klareskog, Karolinska Institutet, Sweden
Medicine	Professor Esther Lutgens, Amsterdam University Medical Center, the Netherlands
Surgical Science	Professor Paulina Salminen, Turku University Hospital, Finland

Digital review meetings for ORU2020, via Zoom 19–22 April 2021

(This document was sent to the reviewers of ORU2020 prior to the digital review meetings 19–22 April 2021.)

Schedule

The schedule for the digital review meetings can be found in the folder “General information” in ORU-Cloud.

There are three type of meetings planned for in the schedule:

1. Meetings with the Units of Assessment (UoA)
2. Review team meetings
3. Meetings with the university management

Each meeting type will be held in a separate Zoom-room. The links to these rooms will be distributed later.

An explanation of the details of each meeting type follows below.

1. Meetings with the Units of Assessment

- The whole review team meets with the assigned UoA in separate time slots, one UoA at the time.
- The main reviewer of each UoA is expected to chair the meeting with the specific UoA (as marked in the schedule).
- Each UoA has been asked to choose 3–6 persons to participate in this meeting. These persons should be representative for the group of researchers as well as the different research areas within the specific unit.
- Each meeting time is scheduled to 90 minutes.
- Each UoA has been asked to prepare a 5–10 minutes presentation to show at the start of each meeting. Apart from this there is no set process for how these meetings should take place. It is up to you in each review team to agree on that.

2. Review team meetings

- A special Zoom-room is being created for each review team to use for their own meetings. This room will be open for the reviewers not only during 19–22 April but until the 18 June when the final review reports are due. This way you will be able to meet if and whenever you like to further discuss ORU2020 review matters.
- All timeslots marked with blue are up to each team to plan and use in the way that suits the team best for the assignment.
- All teams have a one-hour review team time after the introduction meeting (see below). The idea is to use this time to plan for your work during the rest of these days.
- For each UoA a pre-meeting and a follow-up meeting is scheduled to allow the review team to prepare and discuss. The main reviewer of each UoA is expected to chair these meetings (as marked in the schedule).



- Some review teams have time slots in the schedule for more thorough discussions and report writing. The team can choose to use this as best suitable and if more preferred postpone for other time.

3. Meetings with the university management

- On the 19 April there will be an introduction meeting for all reviewers with the Vice-Chancellor, Professor Johan Schnürer, and project team for ORU2020.
- The final meeting on the 22 April, for all except one review team, will be with the management team for Örebro University including the Pro Vice-Chancellors and the Deans. Reviewers from different teams are welcome to discuss findings that might be of general character and important to highlight for the management. The project team will also conduct a short evaluation of the digital review meetings.
- Prior to the meeting with the management on the 22 April each review team is asked to discuss whether there are any findings that are common for all the UoAs. The headings in the template for the review report can be used for this discussion.

Digital hosts

The project team has arranged for digital hosts to support the meetings and guide the teams through the schedule and the different Zoom-rooms for the different meetings. The hosts will also be the link to the ORU2020-project as well as the technical support during these days.

The hosts will not attend the actual meetings unless you ask for someone to enter the meeting for any help. The digital hosts will be reached via chat (more detailed information will come).



TEMPLATE
for reviewers in
Örebro University's research evaluation ORU2020



Objectives of the evaluation

The overall purpose of ORU2020 is to enhance the quality of the university's research by creating a foundation for further development. Therefore, the aim of this evaluation is not to grade research quality/research output per se, but to analyse the preconditions and processes for maintaining and developing good quality and strategic renewal of the research. This evaluation is expected to generate an increased awareness of aspects of the research environment that should be actively maintained and aspects that need to be further developed or changed. Important questions are: Do the university's research environments function so as to provide good preconditions for high-quality research, and are they characterised by processes that drive quality and renewal?

An important feature of ORU2020 is that it should provide each of the units of assessment with an opportunity to develop further their own systematic work on quality assurance and enhancement and their capacity for renewal. This design means that the evaluation is more enhancement-led than control-oriented. It is also intended to serve as decision-making support by providing data for use in strategic development work at different organisational levels within the university.

Thus, we anticipate that ORU2020 will result in increased knowledge about

the strengths and weaknesses of the university's research environments, derived in part from the analysis and reflection involved in the self-evaluation, and in part from feedback and recommendations from external peers. These in turn will be building blocks for further development of the units of assessment and the university as a whole. Indeed, ORU2020 will be a fundamental document in a range of activities aimed at developing the university's research quality and renewal. The exact arrangement for these post-evaluation activities will be determined in dialogue with the various invested parties.

Instructions

ORU2020 is designed to provide each unit of assessment with feedback concerning the quality of their research. One important part is evaluating the unit's productivity during the past five years with a focus on quality and renewal of the research. The second central aspect is evaluating the unit's plan for development, again with an emphasis on quality and renewal. This template provides cues for formulating your feedback.

Unlike previous evaluations, however, there will be no grading of the research. Instead, the evaluation is oriented towards enhancing the development of the units of assessment. Therefore, *we ask that review teams identify, observe and reflect upon strengths and weaknesses in the unit of assessment and make recommendations for development which will strengthen the unit's quality and renewal.* Further, we ask that you do this as a *critical friend*. Keep in mind that the self-assessments are also instructed to be self-critical and reflective.

Quality may be defined in terms of the research being credible, making a contribution, being communicable, and being conforming. In short, *credibility* refers to the cornerstone of research in terms of rigour, consistency, coherency and transparency to produce credible, reliable and valid findings. Another form of quality is the *contribution* the research makes in the form of its impact in the literature, field, and society. *Communicating* research refers to how well results are communicated and transferred to various communities, e.g. the research, professional and lay ones.



Finally, the research should *conform* to national and international standards of ethics, regulations, sustainability and morals.

While review teams may work in different manners, the idea is that each member will be primarily responsible for one unit and assist on the other units assigned to the team. In general, this means that you will, with input from the team, provide written feedback for each of the areas below. Subsequently, each member of the team will read the feedback and provide comments so that a final, joint report can be produced.

This template is designed to assist you in formulating your review and evaluation. Please consider each aspect and provide your feedback keeping the final report within the bounds of the word limit.



ORU2020 Review Report

The total number of words in your report should be a maximum of **2,000 words**.

Unit of Assessment: _____

Review Team: _____

Please insert text under each heading.

1. QUALITY OF THE RESEARCH ENVIRONMENT

1.1 Is the environment well organised to promote quality research?

1.2 Are the main research areas appropriate for the unit and its development?

1.3 Please comment on the unit's reflective analysis of their environment.

Do the structures and processes create good conditions for high-quality research with regards to personnel, leadership, academic culture, national and international collaborations?

Please provide specific comments on the unit's research funding, publications and productivity.

2. QUALITY OF THE RESEARCH

2.1 Credibility.

Does the research environment produce creative and methodologically sound research of high quality? Please identify strengths and weaknesses.

2.2 Contribution.

Does the research make a contribution to the literature, the field and/or society? Please identify strengths and weaknesses.



2.3 Communicative.

Is the research appropriately communicated to the scientific, professional and lay communities? Please identify strengths and weaknesses.

2.4 Conforming.

Are there sufficient routines for ensuring conformity with standards for ethics, sustainability and other regulations?

3. THE UNIT'S DEVELOPMENT PLAN

Please provide feedback as a critical friend. The focus should be on how the unit may best develop its research and enhance quality over the next 5-year period.

3.1 Observations and analysis

Please provide observations, reflections and analyses regarding the unit's development plan. You should include relevance of the plan (Is the plan realistic with a focus on an important and clear path forward? Are there sufficient resources and organisation for meeting the unit's goals?) and highlight strong areas that can be enhanced as well as areas in need of development.

3.2 Recommendations

Please provide suggestions for what the unit should focus on and how improvements might best be realised.

4. CONCLUDING REMARKS

Please summarise your review and provide a closing statement.

PART 2: REVIEW REPORTS

Faculty of Business, Science and Engineering (ENT)

ORU2020 Review Report - Biology

Unit of Assessment: Biology

Review Team 6: Deborah Power (main reviewer), Leif Bülow and Stig Larsson

1. QUALITY OF THE RESEARCH ENVIRONMENT

1.1 Is the environment well organised to promote quality research?

The organisation of the University and the diverse Faculties and management was clearly outlined in presentations given by the Unit of Assessment (UoA) and appears appropriate for the dimension of the university.

- Review team 6 (RT6) were concerned that the institutional structure of the Faculty of Business, Science and Engineering could hamper the full development of each of the core elements within the faculty. Attention should be given to ensure that all UoAs have an equal weight in strategy and decision making.
- RT6 was concerned with the risk of dissociation between research (at the bottom) and management (at the top). Clearer articulation and identification of the research environments at the level of the university would help highlight important research advances and make management connected with the needs and achievements of research ecosystem.
- Building links between the strategic institutional initiatives (SIIs) and the research environments would contribute excellence and expertise and critical mass building in these areas.
- The lack of a site visit by RT6 was a disadvantage. From a space perspective there was concern expressed by the UoA and noted by RT6 that UoA Biology research was housed in different buildings. This is a **threat** as it reduces cohesion, dialogue and collaboration between groups. This adds cost as equipment is replicated and reduces team building and “identity”.
- “Add influence” to the position of Head of UoA, by changing from a consultative role to a decision-making role.

1.2 Are the main research areas appropriate for the unit and its development?

The two main research areas within the UoA-Biology were well identified. The research environments have a fairly broad scope and all research conducted within the UoA fits well within their remit. The specific research areas are clearly defined, specific and timely and complement the teaching areas, which is highly beneficial for the reputation of the UoA - education offer.

Strengths & opportunities

- The advantage of the structure is that the UoA can respond to current and emerging societal challenges and can attract PhD students from a diversity of backgrounds. The research contributes to the UoA by building scientific reputation in emerging areas and is a strength.

- Creating opportunities for building links with the Institutional strategic research areas would be a straightforward way to strengthen and enhance the development of UoA – Biology. Mechanisms to foster this could be “think tanks”, thematic workshops, seminars, and co-promotion of PhD students or Institutional research projects.

Threats and risks

- Mismatch between the duration of research projects (3 Y) and the duration of PhD training (4 – 5 Y), which restricts opportunities to train PhD students. Alternative institutional funding or support for the fourth year should be considered.
- Research teams depend on temporary post-doctoral fellows for critical mass and productivity, which threatens sustainability, and productivity. This is a **significant threat** for UoA research excellence and productivity and teaching (Note: this is a challenge for all universities).
- Critical mass of researchers covering each of the specific research areas within the research environment is small (e.g. average of 2 researchers), this means loss of staff = loss of research area and research productivity. Mechanisms/strategies are needed to create connections and collaborations between relevant research groups, in the UoA.

1.3 Please comment on the unit’s reflective analysis of their environment.

Do the structures and processes create good conditions for high-quality research with regards to personnel, leadership, academic culture, national and international collaborations?

The established structures for management and communication create conditions for high quality research. The recruitment process since the last assessment exercise has created an ethnically diverse research environment and contributed to a strong culture of research internationalisation. The productivity and impact of the research is a measure of the success of this procedure that has favoured the development of strong research areas as revealed by research funding (notably the highly competitive Swedish Research Council - VR, Formas etc) and research outputs. Procedures supporting purchase and access to large, cutting edge research infrastructures have been highly beneficial for research progress.

Strengths & opportunities

- The mechanisms for time allocation to research strongly favour research productivity and career development.
- Financing of Sabbaticals by the Faculty is recommended as a means to strengthen research, visibility, and internationalisation.
- The existence of a grant’s office and innovation office is very positive since they provide training and support to researchers.
- Mechanisms are in place to favour regular meetings for coordination of research activities, administration and teaching within the division, school, and faculty.
- The UoA is led by a female despite the UoA gender bias towards male staff, this gives a strong role model.
- Hiring mechanisms tend to favour hiring towards research areas, which is excellent for critical mass building, but a caveat is it limits the teaching base diversity. The involvement of the UoA in the hiring process is crucial for strategy development.
- ORU faces structural problem linked to aging demographics and several highly productive Professors will retire within the next 5 – 10 years and this is a threat to research

productivity. This is an opportunity to redefine and strengthen existing research areas and strengthen the teaching offer. Mechanisms for resolution: A “talents” scheme to promote internal and external recruitment, hiring of part-time guest professors and establishment of a strategic plan for UoA recruitment (considering both research and teaching).

Threats and risks

- Tension exists between teaching needs, budgets, the credited teaching hours and research time. The budget provided per student and the class size and removal of some of the courses previously taught by UoA - Biology has led to difficulties with research time allocation. Incentives should be provided to those bringing in funding as currently those with funding “pay” those with no funding do not “pay”.
- The high ethnic diversity of UoA – Biology works against representation in leadership positions due to language and cultural issues. Actions is advised to promote involvement in management etc.

Please provide specific comments on the unit’s research funding, publications and productivity.

Nice and clear outline of the funding sources, division between the research areas and the publication outputs. This has grown since the last research exercise and the UoA’s ability to attract funding is very healthy and it brings in more funding than direct institutional budgets. It obtains prestigious funding (not only KKS) and a bonus scheme/co-fund would support and promote applications by all researchers for highly competitive National funds. Bibliometric data shows that Biology maintained quality and quantity of publications during 2013-2019 (almost double since ORU2015).

Threats and risks

- The contribution to UoA – Biology is not evenly shared by all members (some groups are not active in research, but this is difficult to pinpoint due to anonymous nature of the information provided). Perhaps staff not active in research could take on more teaching or administration or be encouraged to collaborate with successful groups.
- Dependence on one major funder KKS, is a risk. Alternative funding sources from Europe and Internationally, involvement in networking actions for research and training would be very positive.
- Funding PhDs is more expensive than Post-docs that tend to be hired. This is a threat as a healthy balance between PhDs and post-docs contributes to potential future staff recruitment and building research excellence.

2. QUALITY OF THE RESEARCH

2.1 Credibility

*Does the research environment produce creative and methodologically sound research of high quality?
Please identify strengths and weaknesses.*

The spread sheet was not easy to screen for ORU outputs as the name of staff was not provided that made ranking authorship position and responsibility difficult.

Strengths

- Very good productivity compared with other universities.
- Strong performance in the attainment of competitive research funding, which highlights, creativity, timeliness and research excellence.
- High quality output with high proportion in Q1 journals and growth since last research evaluation exercise.
- High citation rates for some research outputs certifying research timeliness and impact.
- High incidence of multi-institutional author articles indicating strong internationalisation for some research teams.

Weaknesses

- Fairly narrow coverage of biology this is linked to the critical mass and low activity of some staff.
- High incidence of multi-institutional authorship, ORU is not always leading, which reduces impact (this is not the case of some highly successful groups).

2.2 Contribution

Does the research make a contribution to the literature, the field and/or society? Please identify strengths and weaknesses.

Strengths

- Strong and consistent contribution to outputs from UoA across the assessment period and strong strategic research areas exist in the UoA (e.g. zebrafish, endocrine disruption, toxicology, molecular mechanisms and microbiome/microbiology etc).
- Strong impact and acceptance of UoA outputs based on journal Q and impact (e.g. citations).

Weaknesses

- Fluctuations in annual research outputs and citations (as expected), but this may be an underlying signal of adverse events and could be analysed to establish factors impacting productivity in UoA.

2.3 Communicative

Is the research appropriately communicated to the scientific, professional and lay communities? Please identify strengths and weaknesses.

Strengths

- Strong and clear evidence that all instruments are used for communication to the research community.
- Recognition by the International/National research community through invitations to participate in commissions, editorial boards, conferences, societies, examination committees.
- Communication routes to the education sector are well covered and public communication occurs through press and radio and National TV, this is very positive.
- Good use of innovations with start-ups funded and transfer of knowledge to industry, this is a strength.
- Knowledge transfer and sharing for overseas development is commendable with a global reach, strengthening the University's position in development relevant goals.

Weaknesses

- The role of the Institutional management (high level) in supporting and promoting UoA “communication” was unclear to RT6 and it seemed to depend on volunteers rather than co-engagement by the Institutional management.
- The involvement of PhD and undergraduates in outreach is unclear and the use of social media could be an opportunity for further outreach.

2.4 Conforming

Are there sufficient routines for ensuring conformity with standards for ethics, sustainability and other regulations?

Strengths

- UoA – Biology promotes the use of institutional resources to ensure research conformity.
- Training for PhDs in ethics, animal welfare, GDPR is highly positive.
- Institutional bodies appointed to promote and oversee the conformity of science and associated activities.

Weaknesses

- Individual based, was difficult to establish the balance between responsibilities of the UoA and the University, unclear the autonomy and expectation in this area for the UoA. (However, RT6 notes it may not have all the information about actions, procedures, and committees).

3. THE UNIT'S DEVELOPMENT PLAN

Please provide feedback as a critical friend. The focus should be on how the unit may best develop its research and enhance quality over the next 5-year period.

3.1 Observations and analysis

Please provide observations, reflections and analyses regarding the unit's development plan. You should include relevance of the plan (Is the plan realistic with a focus on an important and clear path forward? Are there sufficient resources and organisation for meeting the unit's goals?) and highlight strong areas that can be enhanced as well as areas in need of development.

Strategic vision UoA Biology

- The UoA – Biology clearly identifies its strengths and ambitions and is realistic about the need to expand the scope to integrate new and emerging areas and exploit opportunities coming from transdisciplinary research.
- Mechanisms for realising their ambition and building strong and progressive research environments are clear.
- The development of the area of Biotechnology is timely and is a natural progression for the UoA since it builds on existing expertise but will widen the scope and expand funding opportunities. KKS funding will be the motor – **RT6 applauds this initiative.**
- The strategic needs for hiring are foreseen and linked with imminent retirement in some areas in which UoA – Biology is strong, and this is a sound principle since qualified, active early-stage researchers exist and leadership will be required.

Plan to attain the vision

- Administrative actions to widen competence and working with management on defining strategic hiring of active researchers/ teachers to widen the scope and future development of UoA. This is a realistic and collaborative way to proceed.
- A realistic consideration is given about how targeting alternative funding FORMAS, VR and Europe can build capacity and extend reputation. Strong support from central grants officers will be required.
- Colocalisation of Biology in a single building is a priority. The success of this requires engagement of institutional management, it will strongly enhance research and moral and facilitate collaboration within the UoA.
- Building on research reputation and success, the UoA will aim for a KKS financed profile, this is excellent as it exploits and builds on expertise, reputation and previous efforts and “empowers” researchers. **This is commendable** and RT6 is strongly supports the potential benefits.
- Actions to strengthen communication with society and stakeholders are commendable and will strengthen UoA research visibility.

3.2 Recommendations

Please provide suggestions for what the unit should focus on and how improvements might best be realised.

- Support successful researchers and build on their success and promote collaboration to leverage advances for strategic Institutional research areas.
- Establish 2 tracks toward continued and amplified research impact, support excellence and stimulate young talent by promotion and active recruitment.
- Maintain strategic institutional support for infrastructure purchase (consider maintenance and technical support) to promote high quality research.
- Promote strategic initiatives (top-down and bottom-up) to create synergies and interdisciplinary collaborations and new research competencies.
- Bottom-up strategic initiatives to “top-up” and facilitate access to funding requiring institutional support (e.g. Co-fund PhD, projects etc.) to boost productivity and moral and reward staff that bring in research funding.

4. CONCLUDING REMARKS

Please summarise your review and provide a closing statement.

The report provided to RT6 was comprehensive and complete and RT6 commends the UoA Biology for the clear and concise document. The established structures for management create conditions for high quality research. The recruitment process since the last assessment exercise has created an ethnically diverse research environment and contributed to a strong culture of research internationalisation. The funding productivity and impact of the research is a good measure of the success of the UoA.

A clear and realistic development plan for UoA was provided, which is achievable but ambitious. Further development of the plan with a clear outline of expected commitment from management and the university including the timeframe and implementation measures will consolidate and



confirm its effectiveness. UoA-Biology is a strong sector, and some specific measures and threats are identified by RT6 in the feedback to facilitate and promote continued growth in research excellence. Strong efforts should be made by the University to house the UoA in one building.

ORU2020 Review Report - Business Administration

Unit of Assessment: Business Administration

Review Team 5: Sven Modell (main reviewer), Niels Haldrup and Anne Persson

1. QUALITY OF THE RESEARCH ENVIRONMENT

1.1 Is the environment well organised to promote quality research?

The unit is organised into two research groups – CEROC and INTERORG – that are relatively distinct but that also collaborate in some respects around individual research projects. Practically all faculty within the unit belong to either of the two groups and there are attempts to stimulate further interactions between them by, for instance, running joint, bi-weekly research seminars. However, the groups are in some respects quite different from each other. CEROC was initially founded some twenty years ago while INTERORG was established around 2013. Also, CEROC is slightly larger but has a smaller number of doctoral students, although a relatively large number of students have graduated in recent years and are now on the faculty within the group. Also, insofar as research is concerned, INTERORG seems to be a somewhat more cohesive and tightly knit group with a larger proportion of publications that are co-authored by several members within the group (often including doctoral students). However, CEROC is trying to move in a similar direction and is encouraging researchers to develop collaborative teams and projects. Some of these projects also cut across the two groups. Overall, there are a number of strong research clusters within both groups that have a track record of relatively high research productivity, ability to produce high-quality research and, not least, generating external research funding. Although not mentioned in the self-evaluation, several researchers within the unit have been instrumental in establishing a new, inter-disciplinary research centre focusing on sustainability issues. The intention is for this centre to form the basis for research collaboration with other units both within and outside the business school. More could possibly be done to extend collaboration with other units within and outside the business school to further inter-disciplinary engagements. There is some evidence of the unit benefitting from several of the recent university-wide research initiatives, which have enabled the unit to recruit junior faculty and at least one doctoral student. However, the unit indicates that it could have benefitted more from these initiatives had there been a better fit with the research profiles of individual faculty members.

The doctoral students seem well-integrated into the two groups and are effectively treated as “junior faculty”. However, apart from a small set of compulsory courses on offer, students generally take other courses that are relevant for their competence development wherever they are available at other universities. The choice of courses is generally made in consultation with the students’ supervisors. More could possibly be done to develop and take part in national and international networks and also provide opportunities for students to spend part of their time at overseas universities. More could probably also be done to encourage doctoral students to take courses provided by established international fora, such as the EIASM/EDEN network. New PhD recruitment is severely hampered by the lack of internal funding and the reluctance of external funders to support doctoral students. All current students are externally funded. This is a major concern for the

future, especially in areas where recruitment of new staff is already challenging, and is a threat to the ability to maintain a vibrant and productive research environment in the longer term.

1.2 Are the main research areas appropriate for the unit and its development?

The two groups cover most topics that would typically be researched and taught within a business administration unit. The exception is finance, which is not really represented in either of the two groups. This is perhaps natural as building “critical mass” in finance is expensive (e.g., requiring large investments in data bases) and, insofar as finance is taught, this is done by staff in the Economics and Statistics unit. The unit has a particularly strong research base in areas such as accounting, entrepreneurship, marketing, organisation theory, strategy and supply-chain management. Much of the research within the INTERORG group has evolved out of the Industrial Marketing and Purchasing (IMP) tradition, with a strong focus on industrial networks and modes of organising, that originated in Scandinavia but that is now well-established as a distinct school of thought internationally. The CEROC group has its roots in a strong focus on management accounting and control, but has also expanded to include other, cognate areas of research such as organisation theory and management and is now one of the leading research groups in management accounting and control in Scandinavia.

1.3 Please comment on the unit’s reflective analysis of their environment.

Do the structures and processes create good conditions for high-quality research with regards to personnel, leadership, academic culture, national and international collaborations?

Please provide specific comments on the unit’s research funding, publications and productivity.

Both groups within the unit have strong leadership from the professors, who are all established experts in their respective fields of research, and a strong track record of producing high-quality research and there is a promising development in terms of an increasing number of journal publications and also a trend towards an increasing proportion of articles in more highly ranked journals (ABS 3 and 4 level). There have been steady improvements in this regard throughout the assessment period although the progress seems to have levelled off (or perhaps stabilised) somewhat in recent years. However, the number of top journal publications (ABS 4 level journals) are still relatively few and scattered over the assessment period. The unit has deliberately tried to avoid the worst excesses of the “publish or perish” mentality and makes a point of nurturing an “allowing”, bottom-up culture, stressing autonomous motivation rather than output control, as a basis the development of research ideas and projects. The emphasis is on the contents of their publications rather than specific publication outlets and the need to regularly publish in “top” journals. While this seems to have created a relatively vibrant research culture within the unit, it is not entirely clear how expectations about what are considered “good” publication outlets are communicated to junior staff and doctoral students. This could potentially create problems related to performance management. However, the unit seems to be very aware of this risk and is taking deliberate steps to mitigate it by emphasising the importance of senior staff leading by example and making a concerted effort to bring junior colleagues and doctoral students along as part of collaborative research projects.

Also, while the overall volume of external funding has increased steadily during the assessment period, junior faculty are still very dependent on internal resources for research. Even though most faculty have some extra research time in addition to the “guaranteed” time, this may not be

sufficient to build a sustained volume of high-quality research. Especially in CEROC, there are still a number of faculty with relatively low research productivity and who seem to spend a larger proportion of their time on teaching and administrative duties. However, efforts are being made by the professors in the unit to free up resources for research for other categories of staff wherever possible, for instance by re-allocating some of their own, guaranteed research funding to junior faculty where they are able to cover their own research activities with external grants. This is especially important given the relatively large number of recently graduated faculty who are at the beginning of their research careers.

The unit has been relatively successful in recruiting young, talented faculty in recent years although it notes the difficulties in recruiting in certain areas where competition for good job applicants is fierce. The challenges of recruiting (and retaining) good researchers constitute a potential long-term threat to the unit, although it has recently been successful in hiring at junior levels. However, more could possibly be done to further internationalisation and diversity, perhaps by making more concerted efforts to recruit internationally. International recruitment could possibly be facilitated by deepening and extending the unit's collaboration with overseas business schools. However, a major concern in this regard is the University's policy regarding the promotion to full professor. The effective cap on internal promotions to full professor creates huge disincentives and has recently contributed to three senior faculty members leaving for other universities in Sweden and abroad. Coupled with the problems of recruiting and funding doctoral students and the requirement to supervise such students for promotion to Associate Professor (Docent), this makes career progression very difficult.

2. QUALITY OF THE RESEARCH

2.1 Credibility

Does the research environment produce creative and methodologically sound research of high quality? Please identify strengths and weaknesses.

The unit has an impressive track record in generating external funding although there are indications that doing so is becoming increasingly competitive. Combined with the positive developments in terms of publications and citations (see below), this is a good indicator of the research being deemed "credible" by the broader scientific community. The relatively low number of publications in "top" journals is perhaps an indication that the research is not seen as "credible" (or perhaps rather relevant) by particular parts of this community. However, given the type of research conducted by the unit, these audiences may not be the most relevant ones in the first place given that many of the "top" journals in some areas where unit has particular strengths (e.g., accounting) tend to have a rather narrow theoretical and methodological focus and be quite conservative. Seeking "credibility" in relation to such audiences might therefore be antithetical to doing innovative and rigorous research that is seen as interesting and relevant by other scientific audiences, practitioners and policy-makers. However, more could possibly be done to increase the number of publications in "top" journals insofar as such journals target relevant audiences.

2.2 Contribution

Does the research make a contribution to the literature, the field and/or society? Please identify strengths and weaknesses.

It is difficult to comment on the qualitative contributions based purely on the data available to us. However, the fact that faculty regularly get their work accepted in highly ranked scientific journals and that the citational analyses show that this work has higher than average citation scores are strong indicators of the research making a significant scientific contribution. A potential caveat in this regard is that the unit's citation scores are currently showing a downward trend. However, it is unclear how much weight should be attached to this since citations are a crude measure of research quality and there may be short-term fluctuations. The invitations of several, senior faculty members to serve as associate editors, editorial board members and guest editors of special issues of respected scientific journals are also clear esteem indicators suggesting that the research being produced within the unit is held in high regard and is seen as making interesting and relevant contributions by the broader scholarly communities in which the unit is embedded.

2.3 Communicative

Is the research appropriately communicated to the scientific, professional and lay communities? Please identify strengths and weaknesses.

Research outputs are regularly published in scientific journals that are relevant for the disciplinary areas in which faculty have their natural academic "homes" and there is also evidence of some faculty publishing in cognate areas, such as education studies, as a result of carrying out empirical research in these areas. The ability to nurture such inter-disciplinarity is a real strength and is perhaps something that can be further developed as part of the new research centre on sustainability that has recently been established. The strong, empirical focus of the research conducted within the unit naturally means that there is a strong link to practice and policy and which also facilitates the integration of research with other activities such as teaching and outreach. Faculty also publish in fora that are more easily accessible to practitioners and policy makers although such publications are perhaps less prioritised than publications in scientific journals. However, there are some concerns that certain types of funding require staff to spend too much time on producing practitioner-orientated publications and engaging in other forms of outreach and that this can conflict with time required to publish in scientific journals. It is unclear if the unit has a well-developed strategy for balancing such competing priorities.

2.4 Conforming

Are there sufficient routines for ensuring conformity with standards for ethics, sustainability and other regulations?

The unit complies with existing rules and regulations for research ethics and seems to have well-developed internal procedures for ensuring that especially doctoral students are made aware of the need to do so at an early stage of their careers. There are also procedures for regularly monitoring that students comply with rules and regulations for research ethics as an integral part of their supervision. However, it should be noted that, under current regulations, much of the research conducted by the unit does not require formal ethics approval.

3. THE UNIT'S DEVELOPMENT PLAN

Please provide feedback as a critical friend. The focus should be on how the unit may best develop its research and enhance quality over the next 5-year period.

3.1 Observations and analysis

Please provide observations, reflections and analyses regarding the unit's development plan. You should include relevance of the plan (Is the plan realistic with a focus on an important and clear path forward? Are there sufficient resources and organisation for meeting the unit's goals?) and highlight strong areas that can be enhanced as well as areas in need of development.

The development plan clearly builds on identified strengths, although more thought could possibly have gone into developing a vision statement for the unit. The development plan highlights the need to continue to nurture the informal and collegial culture that has been established in the unit while guarding against the vagaries of excessive performance pressures related to the growing reliance on output controls in academia. There is a clear and realistic ambition to continue to ensure that this culture continues to generate interesting and relevant research, a sustained ability to generate external funding and integration of research and teaching, although the unit also notes that it could up its game in some regards, such as citations, enhanced international collaboration, recruitment and the impact of research on practice. There is a notable lack of reflection on how the unit could increase the number of publications in "top" journals in the development plan, which is perhaps a consequence of the emphasis on maintaining the "allowing" culture of the unit. Insofar as this reflects a lack of awareness of or attention to such performance aspects, this is perhaps a cause of concern. However, it also needs to be seen in the context of reaching relevant audiences which has been noted above. Major threats identified in the development plan are the difficulties in recruiting and funding doctoral students and recruitment and staff retention problems related to the barriers to promotion within the university. To some extent, these threats also seem to be interlinked in that supervision of doctoral students is a requirement for promotion.

3.2 Recommendations

Please provide suggestions for what the unit should focus on and how improvements might best be realised.

Based on the above assessment, we offer the following recommendations to the unit:

- Continue to nurture the informal and collegial culture while seeking to balance this with appropriate measures that may help the unit to maintain and perhaps increase the quality of its research activities and ability to generate sustained research funding.
- Consider measures that may stimulate a larger volume of publications in "top" journals insofar as this can help faculty leverage existing strengths and explore novel areas of research where its expertise can be deployed.
- Continue to explore opportunities for collaboration within and outside the unit to stimulate inter-disciplinary research activities. Such collaboration may also provide a stimulus for publications in "top" journals in a wider range of fields.
- Increase the efforts to stimulate international collaboration and exchange, not least for doctoral students, in ways that support existing and emerging research activities.
- Consider measures to enhance internationalisation and diversity in faculty recruitment.



- Explore opportunities for addressing the intertwined problems of PhD funding, career progression of faculty and promotion to full professor. This is a challenge that is shared by the other units of analysis within the business school, but it has been amplified by the recent loss of senior faculty in the Business Administration unit.

4. CONCLUDING REMARKS

Please summarise your review and provide a closing statement.

Taken together, we believe the Business Administration unit is on a promising path of development. The unit has established a strong research environment that builds on the strengths of faculty in a relatively broad range of research areas. More could possibly be done to stimulate a greater volume of publications in “top” journals, but it is important that this is not pursued at the expense of the informal and collegial environment and other priorities, such as the ability to attract research grants, engagement with practitioners and policy-makers and the integration of research and teaching. However, we have also identified potential threats against the unit, especially the growing competition for external funding and high-quality faculty and the inter-related problems of PhD funding, career progression and promotion to full professor. It is important that university management is cognisant of and seeks to address these problems to enable the unit to continue to develop along its current trajectory.

ORU2020 Review Report - Chemistry

Unit of Assessment: Chemistry

Review Team 6: Leif Bülow (main reviewer), Deborah Power and Stig Larsson

1. QUALITY OF THE RESEARCH ENVIRONMENT

1.1 Is the environment well organised to promote quality research?

The unit has an excellent gender balance and has a very good composition in terms of different academic positions (3 full professors, 3 adjunct or visiting professors, 7 senior lecturers, 2 adjunct lecturers, 5 researchers and 3 postdocs). The unit has also 13 doctoral students. There is also an affiliated group at Occupational and environmental medicine connected with this UA. It is composed of 2 senior researchers and 2 PhD students.

Full professors have generally a fair amount of research time (25-60 %) when compared with other national universities. Lecturers have much less, 20% research time, which makes it difficult to develop an independent research profile. Possibilities to increase this research time are available via external funding or faculty funding.

The option from the faculty to allow staff to take a sabbatical leave to develop personal research competence is outstanding and represents a unique tool for ORU to promote internal research strength and quality. To what extent this is really used by the staff is unknown, but it is important to maintain this opening.

On the more negative side, there is a lack of possibility for the lecturers to be promoted to full professors. This is definitely a major bottleneck for young and ambitious staff members and it hampers initiatives to strengthen research. It is obvious that that there are difficulties in finding a balance between research and education. However, the present agenda should be discussed within ORU in order to keep the most talented staff and strengthen new research profiles.

1.2 Are the main research areas appropriate for the unit and its development?

Chemistry is a very broad research discipline and ORU only covers a fraction of the research activities that normally are included in this field. For instance, organic synthetic and physical chemistry are central parts, but these are not within this Unit of Assessment (UoA). The research activities of chemistry at ORU is more narrow and are organized within two research environments, the Man-Technology-Environment (MTM) research centre and the Life Science Centre. The chemistry groups are divided into four subgroups, focusing on i) environmental analytical chemistry, ii) environmental geochemistry, iii) metabolomics and exposome, and iv) plant biochemistry. These research areas are highly divergent and the research directions are largely decided by individual scientists. At a first glance, there is a lack of unifying theme for research. However, the division of UoA in the present evaluation is partly unfortunate. The division of the units of assessments into

Chemistry and Biology is far from optimal. The present “chemistry” unit covers more biologically and medically oriented research topics. In itself, this is very good since it provides the university with a focus, which is needed because of the size the research groups. The separation of Biology and Chemistry into two separate UoA should thus be avoided. In addition, it does not reflect present research activities in MTM and Life Science. It would have been better simply to look upon Chemistry and Biology as one unit. This would also strengthen the visibility of the unit in a more global academic context and facilitate the understanding of the description about what is actually going on.

1.3 Please comment on the unit’s reflective analysis of their environment.

Do the structures and processes create good conditions for high-quality research with regards to personnel, leadership, academic culture, national and international collaborations?

The direction of research is determined almost exclusively by individual scientists. This provides an academic freedom to the unit that can promote independence and creativity. However, collaborations within the unit is satisfactory and embrace e.g. the EnForce project, that include the environmental chemistry, inorganic/geochemistry and metabolomics. Another collaborative effort is the ORUs Food and Health initiative, where the biochemistry group and metabolomics group work closely together, with a joint postdoc in a project of characterization of the plant metabolome, connecting that with the sensory elements of the plants and the modification of the growing conditions (e.g. UV light). A third example is the targeted coaching program, called “Coordinated research support for high scientific goals”, in which three of the subgroups in chemistry are included. However, further collaborations should be encouraged. To develop a more global view of where chemistry and ORU in general is moving is important. It is essential to plan and go in different directions, using both bottom-up as well as to-down approaches. This also often gives an opportunity for researchers and lecturers to be involved in research, who normally are not fully active in research. It is essential to involve as many staff members as possible and use the full potential of the unit. Synergies should be promoted as much as possible through open discussions and the regular joint meetings. The goal should be to involve faculties to bring research activities at ORU more together.

The recruitment process is critical and should be guided more by the research qualities and directions than educational needs. This will of course in the long-term strengthen research, but it will also benefit undergraduate programs.

Please provide specific comments on the unit’s research funding, publications and productivity.

The unit is very active with an extensive external research funding from different sources. Between 2015 and 2019 the external funding has increased by impressing 3.6 times. The productivity is also very good with a publication track record that is well above average for a unit of this size.

2. QUALITY OF THE RESEARCH

2.1 Credibility

Does the research environment produce creative and methodologically sound research of high quality? Please identify strengths and weaknesses.

The credibility of the research produced in the unit is highly satisfactory. This is evidenced by the fact that all publications are in good or very good journals. There is also an awareness of what is needed for increasing research quality. However, the unit needs to define what “research quality” means and how it can be measured and monitored over time. It may include obvious parameters such as number of publications and impact factors, but should also involve other aspects such as degree of research funding, collaborations with top ranked institutions and industry, attendances at international symposia, societal interactions. This will provide a more general picture of annual development of research over longer time periods.

2.2 Contribution

Does the research make a contribution to the literature, the field and/or society? Please identify strengths and weaknesses.

The contribution to the scientific literature is very good, in view of the size of the unit. The accumulated publication track record of Chemistry is thus very good to excellent. During 2015-2019, the UoA published 265 articles/reviews, with an annual average of 53 articles/reviews. These numbers are increasing. The weakness is that the authors involved from ORU do not have a leading or communicative role in many publications. There is also a lack of research focus, which is explained by the disparate research aims of the four groups.

2.3 Communicative

Is the research appropriately communicated to the scientific, professional and lay communities? Please identify strengths and weaknesses.

The UoA is very active in disseminating research results in academia, as manifested by publications in high impact journals. This has been further verified by citations and conference invitations. Importantly, academic collaborations are often linked with industrial involvement in several different projects. This has strengthened the position of ORU as a credible partner for exchange of ideas and staff. The unit has also been participating in several public-sector activities, as being members in several reference groups and by the interviews in the public media. This latter part of reaching out to the general public, could be improved further by developing a communication plan, which today appears to be lacking.

2.4 Conforming

Are there sufficient routines for ensuring conformity with standards for ethics, sustainability and other regulations?

This is satisfactory and several measures have been taken to strengthen it further.

3. THE UNIT'S DEVELOPMENT PLAN

Please provide feedback as a *critical friend*. The focus should be on how the unit may best develop its research and enhance quality over the next 5-year period.

3.1 Observations and analysis

Please provide observations, reflections and analyses regarding the unit's development plan. You should include relevance of the plan (Is the plan realistic with a focus on an important and clear path forward? Are there sufficient resources and organisation for meeting the unit's goals?) and highlight strong areas that can be enhanced as well as areas in need of development.

Much emphasis is put on multidisciplinary and visibility. This is certainly most important, but it is essential to keep the strengths of the individual sub-disciplines. An issue related to this is the lack of a more long-term and basic strategic research plan for this UoA. Obvious questions are:

- Should Chemistry be a key discipline at ORU? If so, is Chemistry the proper name of the unit?
- Which parts of chemistry should then be covered at ORU?
- Can recruitments be made purely based on research directions and not linked to teaching demands?
- Which undergraduate programs should be offered?
- How can research and teaching be integrated and benefit from each other?
- How can the four present subareas within this UoA interact even more closely?

3.2 Recommendations

Please provide suggestions for what the unit should focus on and how improvements might best be realised.

The research areas within this UoA are heavily dependent on access to updated and advanced instrumentation. Changes of technologies occur frequently. Since no site visit took place this time, it is difficult to fully evaluate the quality of the present infrastructure. However, the self-assessment indicates that the instruments are handled and maintained by the doctoral students and post docs. This is very risky and means that the personnel are continuously changing, requiring continuous recruitment and education of novel recruits. Dedicated staff for handling the more advanced instruments are needed to secure research quality and also promote collaborations with external partners in academia and industry. Resources for infrastructure must be reserved to a larger degree at the university level and more emphasis should be put on developing a strategy for which instrumentation should be in-house and which should be accessible via collaborations.

As indicated earlier, the degree of external research funding for this UoA is very good to excellent. However, it is important to develop a strategy for future funding. This is linked to identifying research goals. These are not very well defined. The unit will benefit from closer interactions between the individual scientists. However, it is important to find a balance between individual initiatives and more group based ambitions. There is an obvious trend today for many funding agencies to fund larger projects and support bigger consortia. It is essential that the scientists are aware of this new scenario in the funding landscape and also develop toolboxes for managing such



large applications. This should also be handled on the university level, to support such initiatives through support of preparations of applications through an active selection of the most valuable research initiatives. Such support could involve coordination of research, reports, economy and also include support of overheads.

PhD training should be supported further at different levels. Many external grants are only covering three years, despite that most PhD programs involve at least four years of studies and research. Here, the university should promote these efforts by supporting the last year, if other grants are not available for the groups involved. PhD training provides a research environment to the unit and many graduate students need to develop their projects through collaborations. More advanced PhD students can then guide their more junior colleagues. Individual study plans should also be followed up more carefully. There appears to be individuals with exceptionally long studying times.

4. CONCLUDING REMARKS

Please summarise your review and provide a closing statement.

The self-assessment clearly indicates an academic maturity and awareness of strengths and weaknesses. Overall, this UoA is performing well in research, given its limited resources and heavy teaching responsibility. A continuity plan is needed for handling research staff in terms of upcoming retirements and promotions.

There is today a shift in the external funding system, which involves bigger projects and more money into each application. This puts more demands on the individuals and require extensive collaborations. In agreement with the Biology and Physics/Mathematics units, there is today a diversity of research areas driven by individuals who do not seem to interact to a large extent. There is thus great potential in leaving the traditional ways and focus on a few research areas to fit into the new external funding landscape. There is also a potential in taking advantage of ORU being a small university, where it should be easier to find collaborations over department boundaries. However, this may require a modification of the present organisation of the university. Research within chemistry is placed within the Faculty of Business, Science and Engineering. The inclusion of Business into the field of Science and Engineering does not appear to promote the subject of Chemistry in its present form.

ORU2020 Review Report – Computer Science

Unit of Assessment: Computer Science

Review Team 4: Luigia Carlucci Aiello (main reviewer), Kristina Wärmefjord and Folke Björk

1. QUALITY OF THE RESEARCH ENVIRONMENT

1.1 Is the environment well organised to promote quality research?

Computer Science at Örebro University is organised in the Applied Autonomous Sensor Systems Research Centre (AASS). The unit, thus called AASS, consists of a sizeable group of professors, lecturers, researchers and PhD students organised into five teams called laboratories. Each of them addresses key aspects of AI and Robotics and all together they constitute a well-organised international, young, and dynamic environment where to carry on quality research.

1.2 Are the main research areas appropriate for the unit and its development?

The unit is addressing research topics that are central for the development of AI and Robotic systems, instrumental in the solution of very important practical problems. There is no doubt about the appropriateness of the research areas for the unit and its development.

1.3 Please comment on the unit's reflective analysis of their environment.

Do the structures and processes create good conditions for high-quality research with regards to personnel, leadership, academic culture, national and international collaborations?

Please provide specific comments on the unit's research funding, publications and productivity.

The structure of the unit, its management, and the processes being adopted seem to favour the development of high-quality research rather well, the career evolution of personnel, the leadership, academic culture, and finally national and international collaborations. This is also confirmed by the recent start of two new laboratories that are instrumental for the growth and the autonomy of the two young leaders.

The unit is very active in getting research funding from national and international sources including EU projects. Conversely, it is not very successful in getting funds for basic research. There is room for improvement here: The research leaders of the unit are aware that they should be able to spend some energies around basic research problems, and are also aware that they should extend the research areas to include other aspects of AI and Robotics not treated so far, such as Natural Language Understanding.

The unit has also got funds to support the appointment of researchers and PhD students. Hence, the growth that - as reported in the self-assessment document - was expected in the coming years to bring them to a total of about 80 people, is already taking place with a sizeable increase in the positions, in particular those of PhD students.

During the briefing we had on April 21st 2021, they reported that, as of April 15th 2021 they are:

6 Professors + 1 guest

5 Docents

3 Senior Lecturers

1 Associate Senior lecturer, + 2 under recruitment

14 Researchers

5 Post Docs + 1 under recruitment

38 PhD students + 4 under recruitment

These numbers are rather high, mostly the number of PhD students that seem to almost saturate their capacity: they speak in fact of a maximum of 5 PhD students per professor.

Productivity measured in terms of publications is good, but it can be improved.

They lament a decrease of productivity of post docs after relocation into their unit. It is appropriate and considerate to take care of this problem, even though a temporary decrease of productivity is rather normal after relocation, mainly if the new projects in which the post doc is involved are not a strict continuation of the work done for the PhD thesis.

The quality of production can be improved. The members of the unit are strong enough to be more selective on the quality of the publication venues. The numbers in the report show a low coverage in WoS (Web of Science) for their conference publications, this is however due to the fact that the readout in WoS usually is done before the conference proceedings are registered.

The unit's research funding is very high and distributed over different sources. It has to be noted that some of them are very competitive. This has a twofold aspect, on the one side getting grants from them adds prestige and visibility to the unit, on the other side it costs a lot of time and energy to put together proposals that are not very likely to be approved in a competition that sometimes is really too fierce.

2. QUALITY OF THE RESEARCH

2.1 Credibility

Does the research environment produce creative and methodologically sound research of high quality? Please identify strengths and weaknesses.

The research environment produces creative and methodologically sound research of high quality in problems that at present receive a high attention worldwide. This makes the unit attractive for collaborations both externally and internally at the university.

2.2 Contribution

Does the research make a contribution to the literature, the field and/or society? Please identify strengths and weaknesses.

The research carried on in the unit belongs to what is becoming known as “beneficial AI” and it provides contributions to the literature, the field and the society.

2.3 Communicative

Is the research appropriately communicated to the scientific, professional and lay communities? Please identify strengths and weaknesses.

The research is appropriately communicated to the international scientific community through the publication of results in international scientific journals and the communications to conferences, some of them of very high calibre.

Maybe the same effectiveness is not reached in the communication to professional and lay communities. In fact, the unit has a high international composition: there are members of 20 different nationalities, with some lack of knowledge of the Swedish language.

Internationality is certainly a plus, and doesn't create problems as the lingua franca for research in the core area of the unit is English. Conversely, not being fluent in Swedish may have a draw back in the communication of the results and of the potential for research to the local industries and the public in the Örebro region and in Sweden.

Measures should be taken, also considering the appointment of a Technical Communicator - of Swedish mother tongue and culture, to take care of the web site, the press releases, the external communications, etc.

2.4 Conforming

Are there sufficient routines for ensuring conformity with standards for ethics, sustainability and other regulations?

From the self-assessment report, we can say that the research carried on by the unit conforms with standards for ethics and sustainability.

3. THE UNIT'S DEVELOPMENT PLAN

Please provide feedback as a critical friend. The focus should be on how the unit may best develop its research and enhance quality over the next 5-year period.

The unit seems very strong and healthy and very much on track for a significant growth in the next five years. They seem very well aware of their strength and of the aspects where they have to work on more.

3.1 Observations and analysis

Please provide observations, reflections and analyses regarding the unit's development plan. You should include relevance of the plan (Is the plan realistic with a focus on an important and clear path forward? Are there sufficient resources and organisation for meeting the unit's goals?) and highlight strong areas that can be enhanced as well as areas in need of development.

Even though there are several reasons to consider this unit very strong, there are elements of brittleness that should be reflected upon.

- a) The number of people with a permanent position is rather low, in particular if most of the expected growth happens with temporary positions. What if the unit has to face a shortage in external funds? In addition, permanent positions are much more attractive to recruit good candidates.
- b) Counting too much on large competitive projects implies that a lot of energies are to be devoted to proposal writing and to carry on the projects. This may have a negative impact on productivity, in particular for the youngest staff members.

The development plan is sound.

- Increase the manpower.
- Organise the teaching in more coherent and focused curricula.
- Maintain AI and Robots as the driving theme, with an eye on
 - more basic research;
 - aspects of AI research that have been left behind so far, such as Natural Language Understanding;
 - follow the line of Beneficial AI systems that come from the interaction between humans and semi-autonomous systems.

3.2 Recommendations

Please provide suggestions for what the unit should focus on and how improvements might best be realised.

AASS should keep in mind that recruiting at all levels (from full Professors to PhD students) may become very difficult in the coming times as everywhere there are groups that intend to grow, in Europe and not only, due to the large success of AI and Robotics, and the momentum that the connected technologies have reached over the last years. The same applies to keeping the young people.

The offers to attract people must be convincing; the guidance and the help in the construction of a robust CV, and the guarantee of a reasonable evolution in the career (with an eye on equal opportunities) has to be constantly kept in mind. Not attracting or losing qualified researchers could be detrimental to the development of the unit. At the same time an eye should be kept on the balance between permanent positions vs the “volatile” ones.

The unit, still maintaining its scientific and technological profile, should find a unifying common research goal in which all of them feel comfortable, to be used as a calling card for the rest of the university and the territory.

At the same time, considering the pervasive characteristic of AI and robotics, they should start cooperative projects with people from other units within their university, which could provide positive feedbacks to both parties. PhD students co-advised by two advisors in different units may gain a multidisciplinary background that adds value to their research capabilities and is beneficial to both units.

4. CONCLUDING REMARKS

Please summarise your review and provide a closing statement.

In conclusion, AASS is a strong group that can and should grow in the coming years.

They can, because they are sufficiently solid; they should, because:

- a) the research areas they focus on are and will be very important to the development of technology that is crucial for the industry and society of the future.
- b) in the coming years, the demand for persons trained to deal with these technologies can only increase.

Directions in which the unit can improve are mainly the cross fertilisation and cooperation within the University and the technology transfer and communication to the territory. Initiatives are possible in both directions with positive impacts on the unit and Örebro University in general.

ORU2020 Review Report - Construction Engineering

Unit of Assessment: Construction Engineering

Review Team 4: Folke Björk (main reviewer), Kristina Wärmefjord and Luigia Carlucci Aiello

1. QUALITY OF THE RESEARCH ENVIRONMENT

1.1 Is the environment well organised to promote quality research?

The unit is stated to be rather new; it consists of:

- 1 Professor
- 3 Senior teachers
- 2 Teachers

So, the unit is quite small, they have not much time to spend on promoting research because they are also all working with teaching. This can also be expressed as a lack of resources in terms of personnel or of funding. The unit is lacking a formal leader with competence in their field. This may also be an issue of leadership from the ORU.

1.2 Are the main research areas appropriate for the unit and its development?

The unit mentions two initiatives related to research. Both have relevance to the construction sector.

1: Studies of cardboard and the use of a tactile sensor for measuring carton compliance. This is in co-operation with other units within ORU and has recently resulted in two journal papers. As construction engineering, as a scientific field, is very much related to what happens on a construction site, and with the workers' skills and activities, this research can develop further to deal with issues related to, for example, the construction process. In this work there are some commercial partners involved that are active in using packaging.

2: Research about sustainable buildings, with relation to efficient use of resources, like energy and water, and related to both new buildings and renovated buildings. This is an important research area that is also related to the climate change. The initiative here has so far resulted in far-reaching plans for co-operation with a major local facility owner. The plans are still not specified in detail.

1.3 Please comment on the unit's reflective analysis of their environment.

Do the structures and processes create good conditions for high-quality research with regards to personnel, leadership, academic culture, national and international collaborations?

Please provide specific comments on the unit's research funding, publications and productivity.

For the moment it cannot be said that structures and processes in this unit are able to create good conditions for high-quality research.

The senior teachers have PhD-degrees. They have research experience and are able to start new research projects. So, it is possible to develop an academic culture in the unit.

However, they are so much involved in teaching, so they do not have the time needed for development of the research. This is also the case regarding development of national and international collaborations.

It is a structural weakness here related to the leadership of ORU. As mentioned above, the unit is lacking a formal leader with competence in their field.

With regard to the unit's research funding, publications and productivity, they are very aware that they are a small unit. Their outcome is still good when we consider the funding they have received, which also shows that they are able to make research.

2. QUALITY OF THE RESEARCH

2.1 Credibility

Does the research environment produce creative and methodologically sound research of high quality? Please identify strengths and weaknesses.

A small unit like this cannot be anticipated to do much research.

Strengths:

The unit has senior teachers with experience from research work. They have published in scientific journals.

They are also eager to start doing research work and have started to develop plans and establish contacts for going into research work.

Weaknesses:

They have very little time available for research work because they are so active in teaching in the bachelor program "Högskoleingenjör byggt teknik".

The unit has no manager with competence in construction engineering or building technology.

The ideas they present about the area for coming research work are not very specific and need to be developed further.

Good co-operation with public or commercial stakeholders in the field is missing.

2.2 Contribution

Does the research make a contribution to the literature, the field and/or society? Please identify strengths and weaknesses.

The studies, and publications, of tactility of cardboard are a good start although they can be more focused on questions related to construction engineering in the future.

2.3 Communicative

Is the research appropriately communicated to the scientific, professional and lay communities? Please identify strengths and weaknesses.

Not relevant here.

2.4 Conforming

Are there sufficient routines for ensuring conformity with standards for ethics, sustainability and other regulations?

Not relevant here.

3. THE UNIT'S DEVELOPMENT PLAN

Please provide feedback as a critical friend. The focus should be on how the unit may best develop its research and enhance quality over the next 5-year period.

The unit is quite new. They need to develop their plan about what their focus should be, and clearly express their offer to the society. In that way they might be able to reach stakeholders both in the public sector and in the commercial sectors.

3.1 Observations and analysis

Please provide observations, reflections and analyses regarding the unit's development plan. You should include relevance of the plan (Is the plan realistic with a focus on an important and clear path forward? Are there sufficient resources and organisation for meeting the unit's goals?) and highlight strong areas that can be enhanced as well as areas in need of development.

The resources are not sufficient now.

The unit has a big teaching responsibility. It is reason for ORU to think about how they should act to stimulate the personnel and make them able to develop their own competence. This would also make the study program even more attractive. It could be interesting to think about how students could be involved in research projects.

The unit could make benefit of cooperation within ORU. The unit members have ideas about where to find this. They know about other units that have resources such as equipment and competence that could be useful in the coming research of the unit. One example is the unit of occupational and environmental medicine that has instruments for measurement of particles, noise, volatile organic compounds and ventilation ([https://www.ammuppsala.se/sites/default/files/varmote2014/torsdag_fm/Tema_16_J_Westerlund .pdf](https://www.ammuppsala.se/sites/default/files/varmote2014/torsdag_fm/Tema_16_J_Westerlund.pdf)).



Besides the professor, the unit has three senior teachers who are able to do research work, and have PhD-degrees. Having a formal research leader with competence in the field could be a way to enforce research.

3.2 Recommendations

Please provide suggestions for what the unit should focus on and how improvements might best be realised.

The unit needs to gather around one specific subject to develop the research. It needs to position itself and formulate its offer as an attractive research partner.

One possibility in this context is that the unit, with its competence in the technical function of buildings ally with other units having access to laboratory equipment and who also can provide complementary competence and experience.

We believe other units within ORU could also benefit of the competence from the unit of Construction Engineering.

The unit needs a Unit manager/Research leader, who has competence in the field and a formal responsibility to develop the research. This person can probably be recruited among the personnel already available.

A faculty development plan is needed that considers both the teaching needs and the research opportunities and evaluate what critical mass of personnel would be needed to fulfil the plan and to be able to work in a sustainable way. A timeline for this is also needed.

The unit also need to develop cooperation with industrial partners or facility owners keen on strengthen their business by involvement in research.

4. CONCLUDING REMARKS

Please summarise your review and provide a closing statement.

It is important to focus on the competence development plan for this unit. One reason for keeping it alive and growing is because of the high number of students they are attracting and teaching. It is reason to enlarge the faculty because the unit has a heavy workload.

ORU should ensure good future leadership for this unit, with relevant competence in the field.

It is reason to stimulate collaboration within ORU to utilise competence and equipment to develop the research.

The unit should find a well specified research area to gather around, to present as an offer to stakeholders of different kind, financing providers and to the society.

ORU2020 Review Report - Culinary Arts and Meal Science

Unit of Assessment: Culinary Arts and Meal Science (CAMS)

Review Team 2: Christian Fuentes (main reviewer), Alexandra Kertz-Welzel and Otto Fischer

1. QUALITY OF THE RESEARCH ENVIRONMENT

1.1 Is the environment well organised to promote quality research?

The research environment consists of (2) professors, (9) senior lecturers, (1) associate senior lecturer, (1) lecturer, (1) researcher, and (5) PhD students. A research unit consisting of 21 scholars (including both seniors and junior scholars) is not a large unit, which of course comes with some limitations. The unit is led by the head of subject and governed by the head of the School of Hospitality, Culinary Arts and Meal Science.

The environment is well organised to promote research. Staff meetings (monthly), supervisors' meetings (one per semester), and seminars (3-4 per semester) serve as platforms for the discussion on research and the PhD education.

PhD students have welcome-, planning-, middle- and final seminars as well as more frequent PhD seminars (one or twice a month). The PhD students also have two mandatory courses in CAMS guaranteeing a close connection to the research environment.

A PhD program consisting of five PhD students is also rather small. Studies have shown that groups of ten or more PhD students work much better than PhD programs consisting of fewer than ten PhD students. However, as pointed out during the meeting with the unit, the PhD students at CAMS are part of researcher schools and other collaborations that allows them to collaborate with broader groups of PhD students interested in similar topics.

The research of CAMS is organised in four distinct research groups:

- SenseLab – sensory experiences for the future
- Social and cultural perspectives on meals
- Learning and Teaching in Hospitality, Culinary Arts, and Meal Science
- Sustainable work life in the hospitality industry

The research groups complement each other. They are distinct enough to allow the organisation of research but similar enough to enable cross group collaboration.

The research groups lack formal leaders at the moment and have instead contact persons. A more formalised leadership of the research groups would be beneficial if the research groups are to work as organising units. This is something that CAMS is aware of and is also planning to move forward with.

Largely missing is also a supporting organisational structure around grant application writing. The self-assessment report indicates that there are no institutionalised grant application development

and reviewing seminars, no shared application/call calendar, and few efforts are made to support and coordinate grant application writing at the moment. This is an important area of improvement.

Finally, it is also worth mentioning that the move from the Faculty and Humanities and Social Sciences to the Faculty of Business, Science and Engineering has required some adjustment. Different research demands and different funding rules have proved difficult for CAMS.

1.2 Are the main research areas appropriate for the unit and its development?

The research areas are appropriate for the UoA. The research focus of CAMS is on the interdisciplinary field of food/meals and hospitality. The research conducted at CAMS is interesting, innovative and methodologically well developed.

The research groups are organised around different but interrelated areas enabling the development of distinct strands of CAMS research that also can be combined when called for (for example larger research programs, grant applications or specific publications). The unit has a diverse and interesting portfolio of research projects.

However, there is need to reflect upon the future focus of CAMS. Do some research groups need to be prioritised? Are there subjects or competences missing from CAMS research environment that needed to be secured in the future? These are difficult and often politically charged questions that nevertheless need to be discussed.

Also, while there are some exceptions, the majority of the research conducted is practical, managerial and, at times, normative in character. While there is a need for this research it could be complemented with more problematising, theoretically focused research that addresses the underlying social and cultural mechanisms driving and shaping food production and consumption practices.

Finally, a research area or theme that could be further developed is that of sustainability. While there are projects that deal with sustainability and many of the publications produced by CAMS scholars touch upon sustainability issues, there is room for development. Much of the contemporary research on food production and consumption is preoccupied with issues of sustainability. CAMS could do more to (explicitly) engage in these discussions and address and problematise the understanding of sustainability from the different perspectives of the research groups. This could also help build a platform to apply for grants and develop new collaborations.

1.3 Please comment on the unit's reflective analysis of their environment.

Do the structures and processes create good conditions for high-quality research with regards to personnel, leadership, academic culture, national and international collaborations?

While, as mentioned above, the research unit is well organised, there are a number of areas regarding recruitment, career development, and collaboration that need to be addressed.

Securing a continuous recruitment of PhD students is crucial both, as the self-assessment report makes clear, to provide senior lecturers the opportunity to supervise but also because PhD students are often a vital and vitalising element of a research environment. While external grants could play a part in the funding of PhD students it should not be the only source of funding. Internal funding of PhD students is a must for most environments to maintain a stable PhD program.

Improving the recruitment processes and attractiveness of CAMS is a priority, as acknowledged in the self-assessment. More needs also to be done to improve the attractiveness of the PhD positions announced. Calls aimed at relevant and popular topics with the potential to attract a larger pool of applicants could be a way to achieve that.

Also important is providing current staff with the opportunity to develop as researchers so they can be promoted to associate professors (Docent) and full professors in the not-too-distant future. This is key to develop an open and productive academic culture that will enable the production of quality CAMS research.

Mentioned in the self-assessment is also the need to develop the visiting professor program and use these positions more strategically as to benefit junior staff but also grant application writing and network building.

It is clear that CAMS has developed collaboration, both nationally and internationally, but does not have a formulated strategy for how to strategically develop collaborations. More could be done to develop CAMS as a key partner and node of food and hospitality research in Sweden and internationally.

Please provide specific comments on the unit's research funding, publications and productivity.

CAMS has received very few external grants in the last five years. This is, as previously mentioned, an important area of improvement. Food research is relatively well funded and there are numerous opportunities. FORMAS and MISTRA, for example, have a number of foods focused calls, relating both to the production and consumption of food and often linked to sustainability issues. FORTE is a possible funding agency for the work of hospitality workers (and has funded that type of research in the past). There are numerous EU calls focused on food (such as the previous SUSFOOD calls). In addition, food and hospitality can be used as an empirical field to discuss other issues of relevance allowing scholars from CAMS to apply to more theoretically driven calls made by for example VR or RJ.

CAMS has between 2013 and 2019 published 24 peer review papers, 4 books (1 peer reviewed) and 13 book chapters (4 peer reviewed) as well as a number of conference papers. NSD coverage is 100 % for peer review publications and high for WoS (83%) (these numbers drop when considering all publications but that is a not a meaningful analysis since the category "all publications" include a number of popular science papers as under the heading "articles in journals").

The research productivity of the unit could be improved. While the number of total publications is substantial, the number of refereed per review papers is somewhat low in relation to the (mainly internal) research funding of the unit and the number of researchers on staff. However, there seems to be a trend towards more peer review papers (2018-2019), something the self-assessment attributes to the formation of research groups.

2. QUALITY OF THE RESEARCH

2.1 Credibility

Does the research environment produce creative and methodologically sound research of high quality? Please identify strengths and weaknesses.

CAMS research is very methodologically diverse. From sensory methods to observations and text analysis. The research conducted here is both methodologically rigorous and innovative. Few

research units have such as wide range of methodologies at their disposal. This is an important strength.

However, while methodologically strong, much of the research conducted at CAMS seems to be less theoretically well developed. There is a strong track record of establishing and working with key concepts such as the conscious meal and the meal experience. Nevertheless, some of the studies seem less anchored in theoretical discussions and more practical in nature. There is now a wide range of theoretical resources used to conceptualise both food production and consumption (for example within sociology food) and also hospitality work (for example within organisation studies or work studies). More could be done here to draw on and also contribute to these broader theoretical developments.

2.2 Contribution

Does the research make a contribution to the literature, the field and/or society? Please identify strengths and weaknesses.

While the scientific contribution may not be strong by common standards (number of high ranked journal articles and citations), the research profile and composition of the UoA is well positioned to improve its impact in the future: a specific combination of interdisciplinary scholars, focused on a number of hospitality and related food issues, and with several ECRs (Early Career Researchers).

However, the type of scientific contribution made can be reflected upon. Connected to the discussion above, the research conducted at CAMS makes a clear methodological contribution, developing innovative methods for a wide range of topics from brand measurements to sensory aspects. The broader theoretical contributions are however not as clear. More theoretically ambitious projects that go beyond the practical and managerial issues would be an appropriate complement. It is important to keep in mind that the theoretical and the practical are not mutually exclusive.

The contribution to society is clear with several of the senior scholars engaged in public debate and discourse on food related issues. Several of the projects active in the UoA are also linked to societal benefits. In addition, the research produced at CAMS is closely integrated with the teaching at the school of Hospitality Culinary Arts and Meal Science. These are important strengths.

However, as the self-assessment makes clear, more could be done to engage with the industry. There are today several research projects involving the industry, most notably in the field of sensory research. But there is also room for improvement. The research that CAMS does has clear applicability.

2.3 Communicative

Is the research appropriately communicated to the scientific, professional and lay communities? Please identify strengths and weaknesses.

CAMS scholars write papers, book chapters, books as well as popular science pieces. They participate in and also organise conferences and workshops.

Communication research to the general public is one of the strengths of CAMS. Several of the researchers are actively engaged in public discourse on food and hospitality issues, writing for example, popular science articles.

2.4 Conforming

Are there sufficient routines for ensuring conformity with standards for ethics, sustainability and other regulations?

The environment ensures that ethical standards are implemented, also training doctoral students in observing respective regulations and research ethics.

3. THE UNIT'S DEVELOPMENT PLAN

Please provide feedback as a critical friend. The focus should be on how the unit may best develop its research and enhance quality over the next 5-year period.

3.1 Observations and analysis

Please provide observations, reflections and analyses regarding the unit's development plan. You should include relevance of the plan (Is the plan realistic with a focus on an important and clear path forward? Are there sufficient resources and organisation for meeting the unit's goals?) and highlight strong areas that can be enhanced as well as areas in need of development.

The plan proposed is realistic and addresses the main weaknesses identified in the self-assessment report and also corroborated by the review team's analysis.

The focus on developing grant applications by, among other things, compiling and analysing the unsuccessful grant application, involving external partners in discussions regarding future research grants, and enlisting the help the Grant office is a great suggestion.

Similarly, the emphasis on developing visiting professor program and the development of research communication through active conference participation and hosting seems like an adequate response to the weakness identified in the self-assessment.

However, the needed resources to put the plan into action hinges on the unit's ability to secure both internal research funding (for PhD and visiting professors for example) and external funding (to increase research time and output). This is a possible risk.

Also, a better-defined strategy regarding how to attract staff as well as a clearer understanding of what types of competences are needed to develop the research environment is needed.

3.2 Recommendations

Please provide suggestions for what the unit should focus on and how improvements might best be realised.

Discuss and develop the research focus of CAMS

Sustainability could be a key topic for CAMS research and much can be accomplished in this field applying the unique research approaches of the research unit. This can also be an era that allows for cross-research group collaboration.

In addition, we also see the need to complement the often practical, technical, and applied research approach at CAMS with more theoretically driven understanding of the social and cultural mechanisms shaping food production and consumption, engaging, in the processes more with the broader international research field of food studies. To be clear, this type of research already exists at CAMS, it is more a matter of developing this strand.

Continue developing the research groups

The work done with the research groups seems to have contributed to the environment and the plan for these groups is promising.

Improve recruitment processes and strategies

Continue on the path towards more internationalisation and work to improve recruitment strategies and processes. Broader themes when announcing positions could be one way to accomplish this.

Develop organisational structures and procedures supporting grant application writing

This is a key area of improvement. There is a need to develop and institutionalise grant writing routines. Grant application workshops, a shared yearly grant schedule, visiting professors with a focus on grant application writing, and enlisting the assistance of the Grants Office are a few of steps that can be taken to accomplish this.

Increase productivity by supporting peer review paper writing

While there is clearly a need to improve both research productivity and impact, the strategy when moving forward needs to be anchored in and adapted to the aims and goals of the CAMS unit. A journal target list that includes both high ranked journals and developing journals within the CAMS field is one example of how to accomplish this.

Recurring paper writing workshops, focused on the practicalities of paper writing, could also be part of a supporting infrastructure aimed at improving research productivity. These types of workshop useful for all scholars but especially beneficial for Early Scholars Careers scholars.

4. CONCLUDING REMARKS

Please summarise your review and provide a closing statement.

CAMS is an interesting research unit with a unique combination of competence. Combining their different disciplinary backgrounds and research competence, CAMS scholars approach food and hospitality – and in particular the meal experience – from different vantage points producing both multidisciplinary and interdisciplinary research of high quality.

As both the self-assessment report and the analysis of the review team make clear, there are number of areas that are in need of improvement. CAMS however shows great potential and is uniquely positioned to take on many of the challenges that are focal at the moment in food and hospitality studies. To accomplish this, the unit needs to continue developing its organisations and routines, secure external funding, and be willing to discuss and also to some extent adapt or complement its research focus. Also crucial for CAMS to achieve its potential is support from the faculty and/or the university to fund PhD students, developing the visiting professor program and recruit new members to expand the research groups of CAMS. A recommendation is therefore that ORU engages in a dialogue with the UoA to discuss the needs of CAMS and what can be done to support the units progress.

ORU2020 Review Report - Economics and Statistics

Unit of Assessment: Economics and Statistics

Review Team 5: Niels Haldrup (main reviewer), Anne Persson, Sven Modell

1. QUALITY OF THE RESEARCH ENVIRONMENT

1.1 Is the environment well organised to promote quality research?

Organisation and activities

The Unit of Assessment (UoA) has two divisions, statistics and economics, each with a division head. The divisions mainly serve an administrative purpose. There is close interaction across divisions that are organised in five research groups. The UoA has an active program for activities and include regular seminar activities with outside speakers as well as informal brown-bag seminars with internal speakers.

PhD environment

PhD students participate in local courses and a course program consortium in collaboration with other universities in Sweden who offer a range of specialised courses in economics and statistics. Within Scandinavia, there are networks in economics offering specialised courses taught by field experts.

Change of research environment and research visits at other universities seem to take place only on an ad hoc basis, but students are encouraged to do so. This is particularly important for small research environments and units as in Örebro and could be prioritised. Few graduates pursue an academic career and few are placed internationally.

There seems to be some pattern that because PhD students are externally funded, they tend to be less focused on academic mobility and pursuing an academic career. They are closer tied to the company funding them, and also there is a tendency that many PhD students are less present to participate in activities and to contribute to the research environment on a daily basis. It should be added, that unfortunately the funding environment implies that only subfields that can attract funding will be covered in the PhD program which may result in an inappropriate skewness of the study environment and of the unit as a whole.

1.2 Are the main research areas appropriate for the unit and its development?

The UoA is relatively small given that both economics and statistics are covered. The unit seems in a balanced way to cover several research areas and topics in both statistics and economics and to some extent in finance.

Most research in the UoA is applied/empirical, but theoretical research is also included in the research portfolio, particularly in the statistics division. Much research takes the point of departure of access to high quality register data including employer-employee data. The research at the UoA

based on register data is considered to be one of the great research infrastructure strengths. Close ties exist to Statistics Sweden which is a significant research resource.

The UoA has competencies in the societal (including business) and behavioural aspects of robotification, industry automation, as well as methodology in data science. Örebro University has a strategic initiative and focus on artificial intelligence. Business, informatics, economics and statistics have much to contribute to this field. Social and business data science, business intelligence, econometrics, causal inference, and machine learning and its applications are fields where the business, statistics, and economics disciplines can play an important role in the collaboration with other fields.

Four years ago, the School of Business was awarded the AACSB accreditation which is mainly a business school accreditation covering mainstream disciplines; accreditations play an important role in terms of recognition and prestige. It is not clear whether the School has ambitions or prioritises to acquiring the prestigious EQUIS accreditation. Accreditations signal quality of business schools programs and their research.

1.3 Please comment on the unit's reflective analysis of their environment.

Do the structures and processes create good conditions for high-quality research with regards to personnel, leadership, academic culture, national and international collaborations?

Please provide specific comments on the unit's research funding, publications and productivity.

“Empty hall syndrome”

The UoA faces the problem that several faculty members as well as PhD students live outside of Örebro and commute only a few days of week. This has an impact on the research environment. It would be advisable to discuss this problem openly including discussing whether living in the vicinity of Örebro is desirable when recruiting new faculty and PhD students.

Research and teaching time

A good research environment and the production of high quality research depends on ideas, creativity, competences and skills, and not least research time. With respect to the latter, the research time is unequally distributed within the UoA with professors and docents having significantly more research time, especially professors, compared with younger faculty. This is due to structure; only professors have research time. Others get research time from teaching buy-out via research grants.

With respect to external research funding, the attraction of funds doesn't seem to generally reflect the amount of research time available but happens to be very unevenly distributed across individuals across employment categories. Whether extensive teaching is a choice or a trap is the question. Sometimes it's a trap in the sense that persons are employed in positions with significant teaching, 70-80% say, and don't have the time for research and writing funding applications and hence cannot attract the funding that would increase research time. This naturally has implications for their careers, and their promotion options which depend on research productivity, the attraction of funds, and the supervision of PhD students (funded externally).

Career paths

Except for post docs, junior faculty is employed in tenured positions. However, presently the UoA has two associate senior lecturers employed on tenure track. The first step for promotion is the advancement to a docentship where the qualification requirements are decided by the faculty board. One requirement is experience with PhD supervision and research leadership. However, since all PhDs have to be funded from external funds, and if you can't attract funding to supervise PhD students you cannot be promoted. Not everybody has the chance to receive funding within their field which can generate an unbalanced research portfolio of the UoA. This is a very unfortunate trap even for very talented researchers. Examples exist of researchers who supervise graduate students at other universities to obtain supervision competencies to satisfy promotion criteria.

External research funding

The UoA is highly dependent on the attraction of external research funding which is essential for the research activities since it funds research and research time and it is crucial for enrolling PhD students and having a PhD programme.

It is important that the UoA considers whether funding opportunities are optimally exploited and initiate a plan to increase success rates. The research support unit at the university can offer guidance regarding technicalities associated with applications, but professional input from peers who know the subject (and those who do not know the subject) can be useful to make applications more successful.

National and international collaboration

The UoA has close ties with Statistics Sweden at the national level including access to employer-employee register data. International collaboration is mainly initiated as a bottom-up process involving individual researchers. About one third of research papers have international collaborators.

The international collaborations could potentially be expanded and may additionally benefit graduate students. Also, it could be considered to associate international researchers and collaborators on a part time basis, possibly via external funding, in order to stimulate and contribute to the local research environment.

Research output, research quality, and research productivity

Recently there has been a slight decline in research output in quantitative terms. However, when accounting for "quality" measured in terms of top-categories on the ABS-rankings, the decline in publications has been out-weighted by more publications in the more prestigious rank 4 journals. It would be recommended to put even more efforts towards targeting category 3-4- and 4* journals on the ABS ranking.

The unit already has a strategy to attempt expanding research publications in higher ranked journals, perhaps at the cost of fewer publications overall, which is fine. Such a strategy should also include focus on the outlets targeted by graduate students' research publications.

Generally, the number of citations appears to be relatively low but may increase by more focus on publishing in good journals.

2. QUALITY OF THE RESEARCH

2.1 Credibility

Does the research environment produce creative and methodologically sound research of high quality? Please identify strengths and weaknesses.

It is difficult to comment on credibility of the research because it would need deeper scrutiny of actual publications. Ensuring that research papers have undergone a peer-review process before final publication is one way of ensuring credibility of the research, and the UoA has a strong focus on that.

2.2 Contribution

Does the research make a contribution to the literature, the field and/or society? Please identify strengths and weaknesses.

In terms of impact and citations, the researchers of the UoA presently have around 15% of their publications amongst the 10% most cited worldwide. This is above average but leaves space for improvements.

The UoA members contribute to the academic community in many other ways than by publishing. This includes collaboration with Statistics Sweden developing a unique firm level data infrastructure. Several members act in editorial boards of scientific journals as well as in international research assessment panels. Economics and Statistics also hosts the main RePEc services for recording research papers in economics from all over the globe. This is an immense and highly appreciated resource for the economics research community worldwide.

2.3 Communicative

Is the research appropriately communicated to the scientific, professional and lay communities? Please identify strengths and weaknesses.

The UoA has a strong focus on publishing in peer-reviewed scientific journals that seem to be the best match for the research results to be communicated. It is also common to communicate research and scientific opinions in national outlets, e.g. like Ekonomisk Debatt, and thus contributing to the public debate and contribution to the surrounding society more generally. From time to time members of the UoA are appointed to participate in national advisory panels.

2.4 Conforming

Are there sufficient routines for ensuring conformity with standards for ethics, sustainability and other regulations?

There are formalised regulations and procedures to discuss standards for research ethics and this is regularly communicated to PhD students. Several members of the UoA work with individual and firm level register data which is strictly regulated at many levels including the GDPR regulations. Beyond these regulations, it is believed that much of the research undertaken at the UoA does not require formal ethics approval.

3. THE UNIT'S DEVELOPMENT PLAN

Please provide feedback as a *critical friend*. The focus should be on how the unit may best develop its research and enhance quality over the next 5-year period.

3.1 Observations and analysis

Please provide observations, reflections and analyses regarding the unit's development plan. You should include relevance of the plan (Is the plan realistic with a focus on an important and clear path forward? Are there sufficient resources and organisation for meeting the unit's goals?) and highlight strong areas that can be enhanced as well as areas in need of development.

The development vision of the economics and statistics unit is ambitious and spot on. The focus is on improving both quantity and quality of research output, recognition amongst peers in various dimensions, and ensuring a collegial and dynamic research environment as a resource factor necessary to achieve the goals. It is also correctly spotted, that a dynamic PhD program and focus on the research growth layer is essential for an overall dynamic research environment.

To achieve these targets, it is essential to have the necessary financial resources and increasing external research funding with involvement of both internal and external advice and support.

It is a correct strategic observation to consider a limited number of focus areas with critical mass, but it should also be avoided that particular fields tend to dominate the school and provide an unbalanced unit.

3.2 Recommendations

Please provide suggestions for what the unit should focus on and how improvements might best be realised.

Based on the above assessment, we offer the following recommendation to the unit:

The PhD education and the environment for graduate students is essential for the identity of the UoA.

- Consider to make it part of the PhD program that students spend a period abroad to experience a change of research environment to gain experience and to establish international networks. Similarly, be open to host visiting PhD students from other institutions.
- Try to attract PhD funding to establish a broader coverage of research fields and make it possible for all lecturers to gain experience as supervisors and research leaders as part of their own career track towards promotion.
- Attempt to make more talented PhD graduates interested in pursuing an academic career and assist in a systematic way via training, guidance, and advice in "placing" graduates at other universities, nationally as well as internationally.

Research fields are well covered in the UoA given its size. The vision of the UoA to consider a limited number of focus areas is well chosen.

- We do see a potential for contributing to the strategic university initiative on "artificial intelligence" (defined in broad sense) where researchers naturally fit in.

Efforts should be put into attracting more **external research funding**

- We recommend to establish a strategy for improving success-rates of applications, possibly by submitting fewer and more well prepared applications and to target also prestigious grants, e.g. ERC grants.
- Writing skills and quality of applications can potentially be improved. Consider review panels at the school as well as at the unit level to help providing feedback as peers with and without a strong professional insight in the topic of the application.

Increased **collaboration nationally and internationally** may pay off in several dimensions and may add to the diversity of the UoA

- National collaborations may instrumentalise in increased opportunities for external funding.
- International collaboration (individually and formalised) may create better options for PhD students' ability to create networks.
- Attraction of international visiting professors may be useful to increase internationalisation within the UoA and to establish new research collaborations.
- Continue focus on attracting international faculty to positions at all levels.

The suggestions may improve **research output in both qualitative and quantitative terms**. But it doesn't go alone.

- Define a strategy and consider incentive schemes for increasing attention on publishing in higher ranked journals for department members as well as for PhD students.

4. CONCLUDING REMARKS

Please summarise your review and provide a closing statement.

The economics and statistics unit is well-functioning with great potential and a vision for development that we fully support. The UoA has a good foundation to pursue its targets. The UoA is relatively small, but there is a great collaboration and coherence across fields. The UoA is stronger in some areas than in others which is natural given the need for critical mass. The UoA is fully aware that the quality of research output can be improved and it has a strong focus on this when moving forward. This can generate a competitive environment, but it is also important to have a focus on maintaining a collegial and collaborative research environment.

A structural problem we see, where the UoA presently has few tools to act, concerns the frame conditions for running a PhD program of high quality. External funding is essential for educating PhD students at Örebro University, and this may give rise to imbalance of research fields covered in the UoA. There is a growing competition to attract external funding and the UoA and its PhD program is fragile towards its ability to continue attracting such funding. This has further implications for the options for career progression and promotion opportunities.

ORU2020 Review Report - Informatics

Unit of Assessment: Informatics

Review Team 5: Anne Persson (main reviewer), Niels Haldrup and Sven Modell

1. QUALITY OF THE RESEARCH ENVIRONMENT

1.1 Is the environment well organised to promote quality research?

The environment consists of one single research group, CERIS (Centre for Empirical Research on Information Systems). Management consists of the Head of Division and the Head of Subject, working in close collaboration. Overall, this seems a simple and seemingly effective organisation, which should be suitable to promote quality research. The PhD program and its PhD students are also well integrated in the environment.

One concern is that there seemed to be some uncertainty regarding the respective roles and mandates of the Head of Division and the Head of Subject, both in relation to each other and also in relation to the Head of School and the Dean. We therefore recommend that clear role descriptions are developed at university level.

In Section 1.2 we discuss some concerns about the identity and outreach of the subject in the university. This and the seemingly low degree of collaboration with the other units in the school makes us wonder if the university has found the best place for the subject in its organisation. The unit has a lot to gain from increased collaboration with other subjects, particularly with Computer Science and Engineering to which the unit has the potential to make good contributions.

1.2 Are the main research areas appropriate for the unit and its development?

The self-evaluation did not indicate any main research areas. When asked, the group reluctantly mentioned some areas such as E-government, IT in Education, E-health, Information Security and ICT for Development, all relevant to Informatics. It is, hence, somewhat surprising that the group does not seem to target the more general information systems journals and conferences with their publications, but rather the ones that are more focused on specific application areas. We have noted that the lack of clear focus areas has been an issue also in the two previous research assessments.

At the same time, it was indicated that Informatics is a “hidden” subject in the university that is a bit difficult to communicate. As a result, the group consider themselves unnecessarily left out of university initiatives, the AI initiative being one example. An effort should be made to communicate the group’s research on a more concrete level, because the concept of Informatics can be somewhat abstract to those unfamiliar with it.

Also, the unit should consider translating their subject name to Information Systems in English, as recommended by Svenska Informationssystem Akademin (SISA). The term Informatics in the international context is normally much broader and including also subjects such as Computer Science and Software Engineering.

1.3 Please comment on the unit's reflective analysis of their environment.

Do the structures and processes create good conditions for high-quality research with regards to personnel, leadership, academic culture, national and international collaborations?

Please provide specific comments on the unit's research funding, publications and productivity.

Personnel

The unit has a good ratio between senior and junior staff, with 4 professors and quite a few associate professors. However, two professors uphold university level leadership positions, one retires in 2021 and one in a couple of years. This poses a risk to future development.

The balance between female and male staff is good, which is unusual for the area. Some international recruitments have lately been made.

PhD student recruitment is severely hampered by the lack of internal funding and the reluctance of external funders to support doctoral students. All current students are externally funded. This is a major concern for the future and is a threat to the ability to maintain a vibrant and productive research environment in the longer term. Strengthening the group's international network should also be addressed.

The effective cap on internal promotions to full professor creates huge disincentives. Associate professors are increasingly looking for career opportunities elsewhere. Coupled with the problems of recruiting and funding PhD students and the requirement to supervise PhD students for promotion to Associate Professor (Docent) makes career progression very difficult.

The unit needs a proactive recruitment strategy. One important focus should be the ability of new senior staff to attract external funding from a variety of sources, both nationally and internationally, and to publish in high level fora.

Leadership

A well-functioning research mentorship system is in place. However, a strategy for future leadership development should be considered. The role of professors in relation to the Head of Subject needs to be clarified.

Academic culture

The unit has an inclusive collegial culture characterised by active communication, and is manifested in the CERIS code of conduct. PhD students are well integrated. That being said, we didn't quite feel any enthusiasm coming from the representatives in the interview, which concerned us.

National and International collaboration

An increasing number of papers are published with authors outside the Business School. Still there is a need for further and more ambitious development of the unit's research networks, particularly with an international focus. Partners for larger funding applications and increasing the number of non-scientific partners should be a concern.

Funding

There has been a considerable increase in both internal and external funding over the last years, enabling staff to spend around 50 % of their time on research. The number of successful funding applications is fairly well distributed among the staff. Professors naturally contribute to a larger extent, which emphasises the importance of having some productive professors. However, success rates have dropped to no more than 10 %, due to increasing competition, resulting in decreased external grants.

The number of PhD students is sufficient for maintaining quality and critical mass. However, the complete dependence on external funding for maintaining and increasing the number of PhD students is quite concerning. Particularly considering the increasing competition for external funding. We were surprised to find that not even PhD courses are internally funded.

Publication and productivity

Papers are regularly published in relevant scientific journals and conference proceedings. In recent years, a shift from conference publications to more journal publications has been made. In 2019, 37 journal articles were published, which is very good considering the relatively small group, and a substantial number of conference papers were also published. We agree with the group that it is important to keep publishing in conference proceedings, to maintain and develop networks.

Even if the group publishes relatively well, more could be done to increase the number of publications in top general information systems journals and conferences.

With regards to productivity, it is interesting to note that publications have increased recently, in spite of decreased funding.

2. QUALITY OF THE RESEARCH

2.1 Credibility

Does the research environment produce creative and methodologically sound research of high quality? Please identify strengths and weaknesses.

The unit produces relevant and sound research. The sub-area of IT for Development is, at least in the Swedish context, an original one. There are several indicators of credibility:

- 1) A reasonably large number of publications in the top 10 % of Web of Science outlets and the share has increased over time.
- 2) Many appointments to PhD examination boards as well as other scientific committees and editorial boards.
- 3) Success in attracting external funding.

Another indicator is citations to scientific publications. Although some individuals are very well cited, there is still some room for overall improvement in the unit.

2.2 Contribution

Does the research make a contribution to the literature, the field and/or society? Please identify strengths and weaknesses.

The unit makes substantial and tangible contributions to society. In fact, empirical/applied research is a core ethos of the unit. Some important theoretical contributions can also be observed.

2.3 Communicative

Is the research appropriately communicated to the scientific, professional and lay communities? Please identify strengths and weaknesses.

The unit's main communities of communication are found in academia, the public sector and industry and some impact have been made there. They particularly mention the impact of their research into IT in developing countries. The applied nature of their research is an enabling factor for communicating it outside academia. The unit regularly makes appearances in different types of media and also communicates regularly with actors in different sectors, e.g. in healthcare.

Although the unit appears to be strong in the external communication, it struggles to communicate its research internally (see section 1.2).

2.4 Conforming

Are there sufficient routines for ensuring conformity with standards for ethics, sustainability and other regulations?

The unit has a strong awareness of and commitment to ethical research standards. They often apply for ethical approval the projects often deal with issues of equal opportunities based on gender, age and ethnicity. Members of the unit also teach on research ethics in PhD education. As a result of their engagement in these issues, members are involved at university level in committees dealing with equality and research ethics.

3. THE UNIT'S DEVELOPMENT PLAN

Please provide feedback as a critical friend. The focus should be on how the unit may best develop its research and enhance quality over the next 5-year period.

3.1 Observations and analysis

Please provide observations, reflections and analyses regarding the unit's development plan. You should include relevance of the plan (Is the plan realistic with a focus on an important and clear path forward? Are there sufficient resources and organisation for meeting the unit's goals?) and highlight strong areas that can be enhanced as well as areas in need of development.

The vision for the upcoming 5-year period is that "CERIS is a thriving and (internally) well known research group". Four main areas of development are identified: 1) recruitment of PhD students, replacing outgoing professors, attracting external funding and promoting the CERIS group (internally and externally). The areas are well chosen. The plan outlines a clear path forward. We believe that the recruitment of PhD students and the replacement of outgoing professors is critical in order to even *maintain* the current standing of the unit.

The plan is reasonably realistic, but the recruitment of PhD students and replacement of outgoing professors are dependent both on external funding and support from the university/faculty. As in the other two units that we have reviewed, this unit struggles with the lack of such support. No PhD students are funded internally, no promotions to professor are allowed and replacement of outgoing professors is uncertain. We find these practices to be counterproductive to the development of the academic environment, which we have also communicated to university management in a separate letter. With regards to professors, the unit has four at that the moment. Two of them uphold university level leadership positions, one retires in 2021 and one in a couple of years. We believe that at least two are needed, with full attention on the research and education of the unit.

3.2 Recommendations

Please provide suggestions for what the unit should focus on and how improvements might best be realised.

The prioritised areas of development are well chosen. However, we recommend that the group also develops a strategy for further strengthening the sub-areas of their research, such as e.g., e-government, information security, IT in education, e-health and IT for development.

We also recommend that further efforts are made towards publishing in the top general journals in the field.

Recruiting PhD students

The university needs to reconsider its strict policy not to fund PhD students internally at all.

The unit should consider investigating the possibility of funding an industrial PhD school through the Knowledge Foundation, focusing on an area of interest to industry and in collaboration with other relevant schools in the university and other eligible universities in Sweden. One suggestion is to focus on multi-disciplinary research into AI and its application, which would also bring Informatics closer to Computer Science and Engineering. Note that the subject of all PhD students in such a school would not necessarily have to be the same.

Replacing outgoing professors

Our view is that the university needs to reconsider its strict policy not to promote professors (see section 1.3).

We recommend investigating the possibility to fund the recruitment of professors (and other staff categories as well) through the Knowledge Foundation program Recruitments. The program could particularly open the possibility for funding an international guest professor for a year with just a 10 % contribution from the university. Such a recruitment, with the right profile, could help boost the renewal and further development of the group.

Finally, we recommend that the unit strives for expanding its international networks and collaboration.

4. CONCLUDING REMARKS

Please summarise your review and provide a closing statement.

The unit has, since the previous assessments in 2010 and 2015, had a positive development in several areas, albeit from a low level according to the reports:

- The number and quality of publications has increased significantly.
- Citations have increased.
- The ratio of publications in national and international collaboration has increased.
- Research funding has increased significantly, resulting in a staff being able to spend around 50 % of their time on research.

However, the unit is at a critical stage in their development and the ambition should be raised to secure and further advance its position. Potential threats against the development are the growing competition for external funding and high-quality faculty and the inter-related problems of PhD funding, career progression and promotion to full professor.

ORU2020 Review Report - Mathematics and Physics

Unit of Assessment: Mathematics and Physics

Review Team 6: Stig Larsson (main reviewer), Deborah Power and Leif Bülow

1. QUALITY OF THE RESEARCH ENVIRONMENT

1.1 Is the environment well organised to promote quality research?

Full professors have 70 % research time, which is rather generous in comparison to mathematics/physics departments in other universities.

Lecturers have 20 % development/research time, which is normal, with a possibility to apply for 50 % research time, which is good, but it seems to be limited by the lack of faculty funding and external funding. Only two colleagues have such research time now.

The faculty/division does not fund PhD students, which is unusual in comparison to mathematics/physics departments in other universities. This is not good, in view of the difficulty of mathematics/physics to obtain external funding. Therefore, the Unit of Assessment (UoA) has no PhD students at this time.

1.2 Are the main research areas appropriate for the unit and its development?

The research areas cover a rather wide range of subdisciplines of mathematics/physics. These are rather disjoint and often represented by one person alone. This is not efficient in terms of critical mass and the like. But it is not surprising: it is what you would get if you scaled down a typical Swedish mathematics department from a large university to the size of ORU.

This also means that no “main” research areas are identified in the self-assessment, but of course some areas are more active and productive.

We think that the research areas are appropriate given the history and development of the unit and the way Swedish mathematics works, but not appropriate for the further development of the unit.

1.3 Please comment on the unit’s reflective analysis of their environment.

Do the structures and processes create good conditions for high-quality research with regards to personnel, leadership, academic culture, national and international collaborations?

The rapid growth of the UoA was motivated by the expansion of the engineering education and the teacher education. Most of the recruitments were lecturers. They were selected on the basis of both teaching and research qualifications, but they have a heavy teaching load. This creates good conditions for teaching, but not for research of high quality.



The recruitment is guided by choosing the best candidate (with respect to both teaching and research) irrespective of the research area. This is normal in mathematics/physics. It leads to a diverse faculty with little internal cooperation.

The research is mostly driven by individuals, which gives a high degree of freedom, but is not an efficient way of leadership in a small environment. An exception is the guest professor in physics, who has a small research group in condensed matter physics. However, the guest professor is mainly based in Uppsala university, so this is not completely “endemic” to ORU.

Please provide specific comments on the unit’s research funding, publications and productivity.

The level of external funding is quite low. The unit has one grant in applied mathematics from the Knowledge Foundation and one grant in physics from the Swedish research council. However, one should bear in mind that in pure mathematics or physics there are rather few funding opportunities for individual researchers, mainly the research council, which is very competitive. Therefore, this low level of funding is to be expected.

The number of publications increased dramatically in 2017, which seems to be due to the recruitment of researchers with many publications. But the overall productivity is rather good given the high teaching load that most members of the unit have. All papers are published in refereed journals, which is normal in mathematics and physics.

2. QUALITY OF THE RESEARCH

2.1 Credibility

Does the research environment produce creative and methodologically sound research of high quality? Please identify strengths and weaknesses.

The credibility of the research produced in the unit is quite satisfactory. This is evidenced by the fact that all publications are in good or very good journals. The two associate senior lecturers (tenure track positions) have also been recognised for their research. One associate senior lecturer’s thesis was highlighted internationally in several ways. He obtained funding for a PhD student in AI from WASP but was not able to accept it. The other senior lecturer received a starting grant from the research council. Of course, these achievements were based on work done before they came to ORU but may be taken as evidence for the credibility of their present work.

2.2 Contribution

Does the research make a contribution to the literature, the field and/or society? Please identify strengths and weaknesses.

The contribution to the scientific literature is quite satisfactory, in view of the small size of the unit. The weakness is that the results are scattered over many research areas.

2.3 Communicative

Is the research appropriately communicated to the scientific, professional and lay communities? Please identify strengths and weaknesses.

The research is mainly published in refereed journals of mathematics and physics. This is quite satisfactory.

2.4 Conforming

Are there sufficient routines for ensuring conformity with standards for ethics, sustainability and other regulations?

This is satisfactory.

3. THE UNIT'S DEVELOPMENT PLAN

Please provide feedback as a critical friend. The focus should be on how the unit may best develop its research and enhance quality over the next 5-year period.

3.1 Observations and analysis

Please provide observations, reflections and analyses regarding the unit's development plan. You should include relevance of the plan (Is the plan realistic with a focus on an important and clear path forward? Are there sufficient resources and organisation for meeting the unit's goals?) and highlight strong areas that can be enhanced as well as areas in need of development.

It is important for this UoA to obtain better funding of research. The self-assessment identifies a weakness in a lack of engagement in applied research but also points out the difficulties in going from self-motivated research into applications-driven research. This is risky, time consuming, and requires dedication. We agree that this is the way to go, there is great potential here, but it will require good leadership and some initial funding from the university. The physics part of the UoA already works in this way to some extent.

There is a graduate program in mathematics, but it is not operational for the lack of PhD students. We find that it is essential to get this going in order to have a lively academic environment.

We have got the impression that, in practice, there is no career ladder for the faculty members. It is important that there is a possibility to be promoted, otherwise you risk losing young promising researchers.



3.2 Recommendations

Please provide suggestions for what the unit should focus on and how improvements might best be realised.

The unit should try to consolidate the research into a few research areas and form research groups. This would require that some individuals change their areas. These areas are most likely to be found in applied mathematics and computational mathematics, as these are already strong and already work in collaborative ways. Future recruitments should be aligned with this; it may be argued that it is essential to cover all mathematics areas for the needs of teaching, but we do not think so.

The faculty needs to provide some initial funding to facilitate the change of direction, so that interested researchers find time to build new collaborations and take part in new projects.

ORU already has strong research in AI, but this UoA does not take part in it. There are opportunities for mathematicians (in particular computational) to make important contributions here. This area opens possibilities for external funding, e.g., WASP.

There is a trend today for many funding agencies to fund larger projects and support bigger consortia. It is essential that the scientists are aware of this new scenario in the funding landscape and also develop toolboxes for managing such large applications. This should also be handled on the university level, to support such initiatives through support of preparations of applications through an active selection of the most valuable research initiatives. Such support could involve coordination of research, reports, economy and also include support of overheads.

The faculty should fund a few PhD students in mathematics.

Make sure to keep both associate senior lecturers. A career ladder would be important here.

4. CONCLUDING REMARKS

Please summarise your review and provide a closing statement.

This UoA is performing well in research given its limited resources and heavy teaching responsibility. It is operating in a way that is traditional for mathematics and (theoretical) physics. This means that there is a diversity of research areas carried by individuals who do not interact very much. There is therefore great potential in leaving the traditional ways and focus on a few research areas. There is also a potential in taking advantage of ORU being a small university, where it should be easier to find collaborations over department boundaries.

The insightful self-assessment is a strength. It shows that there is an awareness of these limitations. However, a change of direction will require good leadership and consensus among the colleagues, as well as additional resources from the university.

ORU2020 Review Report - Mathematics, Science and Technology Education

Unit of Assessment: Mathematics, Science and Technology Education

Review Team 1: Ulla Runesson Kempe (main reviewer), Harriet Silius, Magda Pieczka and Roger Säljö

1. QUALITY OF THE RESEARCH ENVIRONMENT

1.1 Is the environment well organised to promote quality research?

The unit of assessment (UoA) consists of one professor, one docent and five senior lecturers, thus, it is a small unit with few senior researchers. Changes in senior staff and lack of critical mass are therefore obvious critical points to consider for the future.

Another critical point is the unit's heavy teaching responsibility in undergraduate teacher education; lecturers and senior lecturers have 80% teaching time in their contracts. This imbalance risks to take priority in the daily work, and the very limited time allocated for research becomes fragmented. The research context will likely be less attractive to research-oriented PhDs. In turn, this is likely to have implications for recruitment and the quality of research and teaching.

Whereas in Mathematics Education the PhD students are enrolled and supervised at ORU, the PhD students in Science and Technology education are enrolled in education programs at other universities. These students are supervised at the universities they are enrolled. This risk becoming an obstacle to establishing a strong and united environment with a shared identity and for maintaining continuity in the academic staff. The problem could be solved if a PhD training area (forskarutbildningsämne) were established in Science and Technology Education at ORU, as the UoA wishes.

Although a common research interest (practice-based research on learning and teaching) is mentioned, from the self-assessment and the discussion, it becomes obvious to the Review team that the members of the UoA see and identify themselves as two sub-groups: Mathematics Education and Science and Technology Education. The establishment and consolidation as a group is further prevented by being physically located in two different buildings implying no daily and informal contact. Despite obvious overlaps in interests, there is less of a joint focus and shared identity. The Review team notices differences in background and identity of the sub-groups, too. Whereas the Mathematics Education group seems to lean more towards Education, the Science and Technology Education group have a stronger identity in the disciplines of Natural Science.

Furthermore, despite being interdisciplinary research areas and belonging to the same department as Mathematics and disciplines of the Natural Sciences, no obvious collaborations with these seems to be the case.

1.2 Are the main research areas appropriate for the unit and its development?

Six themes of research are listed, all are relevant for the research area, and they resemble international research. However, given the size of the UoA, the Review team considers them to be too many and too broad. It is our impression that the UoA has not worked on clarifying the scope and focus their research so far. This is an important area of work to be done if the unit is to function properly as one coherent unit of research with a common agenda.

1.3 Please comment on the unit's reflective analysis of their environment.

Do the structures and processes create good conditions for high-quality research with regards to personnel, leadership, academic culture, national and international collaborations?

The UoA has a realistic appreciation of its own position in the university organisation. Particularly problematic is the situation with few senior researchers and the heavy teaching load with assignments in multiple teacher education programs. The UoA recognises that the culture is not coherent and depends on individual academic histories and identities. Its small size, lack of critical mass, and difficulties with recruitment are noticed especially in relation to possibilities for development. The UoA's involvement in national and international networks and collaboration is recognised, but it is noticed that this depends on individuals' rather than the unit's initiative. Some of the collaborations are not formalised in a way that ensures sustainability over time.

Please provide specific comments on the unit's research funding, publications and productivity.

Considering the limitations of resources in terms of personnel research capacity, the UoA has been successful in publishing and, hence, demonstrated the capacity to publish in relevant and recognised scholarly contexts. Co-authoring, nationally and internationally, seems to have been of importance in that respect. The credit is however unevenly distributed with some, senior, members being disproportionately more productive.

The UoA recognises a lack of strategy for research funding, nevertheless it has attracted funding from different research funding sources, external as well as internal. Municipalities in the region have been important funders. It is not clear in what way the UoA is involved in and plan to benefit from the university's strategic initiative 'Teacher education for tomorrow'.

2. QUALITY OF THE RESEARCH

2.1 Credibility

Does the research environment produce creative and methodologically sound research of high quality? Please identify strengths and weaknesses.

There are publications in well recognised journals, even though the volume is modest. The Review team notices that these are authored by few individuals in the UoA. This most likely mirrors the size of the UoA and the limited time for research in the members contracts. Being dependent on few individuals is unhelpful in creating strong and sustainable capacity for successful publishing strategy.

2.2 Contribution

Does the research make a contribution to the literature, the field and/or society? Please identify strengths and weaknesses.

The contribution to the literature covers different areas in Mathematics, Science, and Technology Education such as communication in classrooms, teaching, learning, and teacher competence, giving important contribution to research on conceptual learning and teacher education. However, again, considering the size of the UoA and the rather individualised and scattered research interests we have seen so far, are factors that pose a threat to establishing a strong research environment.

2.3 Communicative

Is the research appropriately communicated to the scientific, professional and lay communities? Please identify strengths and weaknesses.

With some exceptions, the publishing is mainly aimed at the academic community. To establish the UoA as an academic group this seems to be an appropriate strategy. However, the research interests and results are at the same time addressing teachers and teacher education, and therefore in the future the Review team would welcome other forms of publications that communicate to an audience outside academia, too. It must be noticed however, that the current close collaboration with teachers in various forms of practice-based research, communicates and disseminates research results to the professional community.

2.4 Conforming

Are there sufficient routines for ensuring conformity with standards for ethics, sustainability and other regulations?

The Review team got the impression that the issues of ethics had not transformed into conscious practices at the UoA. It appears as if the University needs to make sure that important policies and regulations reach all basic units. There is a gender balance in staff with predominance of Swedish researchers. The review team notices, however, that there is no explicit and formal principle followed for recruitment as regards gender, ethnicity, and age.

3. THE UNIT'S DEVELOPMENT PLAN

Please provide feedback as a critical friend. The focus should be on how the unit may best develop its research and enhance quality over the next 5-year period.

3.1 Observations and analysis

Please provide observations, reflections and analyses regarding the unit's development plan. You should include relevance of the plan (Is the plan realistic with a focus on an important and clear path forward? Are there sufficient resources and organisation for meeting the unit's goals?) and highlight strong areas that can be enhanced as well as areas in need of development.

The development plan articulates a clear and ambitious vision with explicit goals and detailed descriptions of support needed. The Review team endorses the ambition to consolidate and strengthen the area of research. Particularly the ambition to strengthen national and international

cooperation and increase international publication is appreciated and would be strategically important.

One complication, however, is that the presented development plan is focused on two separate sub-units, rather than one coherent unit. Although having some goals in common, the impression is that the sub-units to some extent have different priorities. The plan articulates realistic strategies to achieve the goals formulated, but with the current organisation, limited resources, and without strong support from the faculty and university, the UoA has significant challenges ahead.

3.2 Recommendations

Please provide suggestions for what the unit should focus on and how improvements might best be realised.

To establish the UoA as a vital och nurturing research environment with a clear identity, nationally as well as internationally, and with a focused research direction for the future, the Review team would recommend:

1. Development plans to deal, in the first instance, with creating a coherent research unit with a reasonably shared academic focus that can ultimately play a part at the national and international level of research. One possibility would be to have a shared research project to develop synergies between the two research groups.
2. University support to create a post as assistant professor (biträdande lektor) advertised internationally and defined in terms of research needs.
3. To maintain and expand national and international collaboration. To ensure a long-term perspective and sustainability, this will probably require a more formalised cooperation with support from the faculty.
4. Organising an appropriate PhD training in this area at ORU. While at early stages collaboration, a level of dependence on other universities in this respect is understandable, in the long run, this can be a threat for identity, recruitment and for establishing a coherent and vital academic culture.
5. To use resources for research fully, we would recommend planning staff duties in a way that allows continuous time to engage in research.

4. CONCLUDING REMARKS

Please summarise your review and provide a closing statement.

The overall impression the Review team formed of the UoA is that it is dedicated and has ambitions for the future. We see the UoA as being in early stages of the establishment of a unified research environment, which requires attention and support. The assessment indicates a potential to publish and attract funding and, in various ways, contribute to the area of research and to the University. The size of the UoA, with few seniors and active researchers, the lack of a critical mass and less possibility to enrol masters and PhD students in programs in Mathematics, Science and Technology Education (STEM education) at ORU, makes the UoA vulnerable.

It is unclear to the Review team what the University's intentions and expectations are with regards to the research profile of this unit. The area covered in the context of University's strategic interest in "Teachers for the Future", together with the UoA's visions to establish practice-based research, are clearly significant for the future, but further successful development of the UoA will be



contingent on the University's commitment to capacity building in this area. The UoA is, on the other hand, strongly encouraged to develop paths to become a more unified group, nationally profiled within the area of STEM education research.

To conclude, to build a shared and vital academic culture of research and research training for STEM education, several efforts to support the UoA to become a unified environment are necessary.

ORU2020 Review Report - Mechanical Engineering

Unit of Assessment: Mechanical Engineering

Review Team 4: Kristina Wärmefjord (main reviewer), Folke Björk and Luigia Carlucci Aiello

1. QUALITY OF THE RESEARCH ENVIRONMENT

1.1 Is the environment well organised to promote quality research?

The mechanical engineering unit did a restart in approximately ten years ago and many of its present faculty joined in 2016. In that sense, the unit is quite young and the environment is under development. They have a management structure suitable for the size of the organization.

The subject is not linked to external organizations on organizational level, but the staff have memberships in different research organizations on personal level. They also plan for application to CDIO (Conceiving - Designing - Implementing - Operating, an educational framework initiative), to develop teaching and education.

They do an extensive amount of teaching and especially when developing new courses, and adapting existing courses to digital teaching, this is time consuming. However, from a research environment point of view, it would be beneficial for the unit to host a mechanical engineering master's program (Civilingenjörsprogram, Maskinteknik). This would secure both their position in the university, as well as give a good basis for recruitment of PhD students to the environment.

To further develop the subject, the unit would benefit from being classified as a "preferred partner" to some of the larger international manufacturing companies, based in Sweden (such as Scania and Volvo). To achieve that, they need mandate to allow for such an evaluation/classification. This is something that should be discussed with the Head of the School and the Dean of the Faculty.

1.2 Are the main research areas appropriate for the unit and its development?

The main areas seem very appropriate. "Mechanics and materials (M&M)" and "Digitalized product and production development (DPPD)" go well together and cover a large share of the product realization process. This does also include new manufacturing technologies, such as additive manufacturing.

The M&M group is in the process of developing its focus further on, while the DPPD group is more established.

1.3 Please comment on the unit's reflective analysis of their environment.

Do the structures and processes create good conditions for high-quality research with regards to personnel, leadership, academic culture, national and international collaborations?

Please provide specific comments on the unit's research funding, publications and productivity.

The unit has an ambitious plan for recruitment, which is good, but it depends of course heavily on available funding, both external funding and faculty funding. The latter one is an enabler for permanent positions, which increase the attractiveness, not least among international candidates.

The unit has an extensive amount of contacts and collaborations, both within academia and within industry. This is a way to increase visibility, and in the area it is also a necessity to be successful in project applications.

On the weaker side, it can be concluded that the unit is quite small, and is dependent on a small number of staff. Also, the number of PhD students is too low given the number of senior staff. The unit is aware of this, but the problem is of course related to funding. In the competence planning, new PhD students are included. Externally funded PhD students can also be a part of this. One problem in this area is that most of the research projects open up for financing during three years, which is too short to finance a PhD student. From the unit's perspective, it would be very beneficial with internal funding covering the remaining part of a PhD student employment, given that a three-year project funding is secured.

The unit publishes in both conferences and journals, and to increase the number of publications, a more strategic publication plan is under development. The output is good, given the size of the unit and its teaching load.

2. QUALITY OF THE RESEARCH

2.1 Credibility

Does the research environment produce creative and methodologically sound research of high quality? Please identify strengths and weaknesses.

The research environment has, despite its relatively small size, a high impact on society, given its vast amount of industrial and academic contacts and collaborations, invited talks and memberships in boards and organizations.

The efforts in this area seem to be relying on quite a small share of the staff. It is important that everyone contributes as much as possible (with respect to teaching duties etc.).

2.2 Contribution

Does the research make a contribution to the literature, the field and/or society? Please identify strengths and weaknesses.

They publish in quite good journals, but the citation rate is on the lower side. Maybe some extra effort could be made to secure that their publications are covered by Web of Science and that journals with high impact factors are chosen.

Via teaching, the unit contributes to the society by producing students, attractive for employment. This impact can be further strengthened by the establishment of a five-year educational program in mechanical engineering.

2.3 Communicative

Is the research appropriately communicated to the scientific, professional and lay communities? Please identify strengths and weaknesses.

The same strengths and weaknesses as outlined in Section 2.1 and 2.2 apply. The unit contributes to industry/society by a number of activities and collaborations, and also take part in conferences, give keynote presentations and publish in journals. However, most of those activities are depending on a small share of the staff.

2.4 Conforming

Are there sufficient routines for ensuring conformity with standards for ethics, sustainability and other regulations?

The unit follows the governmental rules for funding, as well as the European code of conduct for research integrity. Also, in the PhD student education, a course in ethics in research is mandatory.

3. THE UNIT'S DEVELOPMENT PLAN

Please provide feedback as a critical friend. The focus should be on how the unit may best develop its research and enhance quality over the next 5-year period.

3.1 Observations and analysis

Please provide observations, reflections and analyses regarding the unit's development plan. You should include relevance of the plan (Is the plan realistic with a focus on an important and clear path forward? Are there sufficient resources and organisation for meeting the unit's goals?) and highlight strong areas that can be enhanced as well as areas in need of development.

The unit has a very ambitious development plan. The vision is somewhat general, while the development plans are more precise. The two research groups are not at the same level; the DPPD group being more mature. The M&M group needs to develop and attract partners and funding.

It can also be noted that one of the driving forces in the unit will retire in some years. He is also responsible for a large share of the external collaborations and industrial contacts. This is taken into consideration in the development plan.

The unit will need some support from the School/University to fulfil some parts of the development plan. Among those are the establishment of a five-year education program in mechanical engineering, the establishment of an internal research environment and necessary mandate and support to enable Mechanical Engineering at Örebro University to be evaluated as a strategic partner to some of the major actors in Swedish industry. Also, Örebro University needs to be included in strategic research programs, such as “Smart Industri”, to allow the unit to fully develop its collaboration with important actors in the area.

The unit works to establish more formalized contacts with industry via an “industrial research and teaching advisory council”. This can, and should be, a way to secure committed industry contacts who have a strategic plan of utilizing the competence within Örebro University in order to take advantage of this in their long-term operations and business plans.

The unit has a lot of collaborations world-wide with industry and academia. However, the collaboration within the Örebro University could be improved. Depending on the economic status of the university, it might be relevant to consider some kind of “seed-money” to enable and encourage small start-up projects including actors from different units within the university. This might also open up possibilities for common EU funding applications. The unit of assessment have some ongoing internal collaboration with other units, but this can be increased.

3.2 Recommendations

Please provide suggestions for what the unit should focus on and how improvements might best be realised.

The unit is doing well research-wise and has also an extensive teaching load. To further develop the unit, the review team has the following recommendations and comments.

- Funding is central for the unit, if the development plan should be possible to follow. Encourage staff on all (senior) levels to contribute to project applications and funding possibilities.
- The number of PhD students needs to be increased.
- The external collaboration is extensive, which is good. However, it is also time-consuming with many collaboration partners. Be selective when starting new collaborations, and make sure they lead to funding possibilities and/or scientific impact.
- Investigate possibilities for internal (and to start with, internally funded) collaborations.
- The M&M research group needs to establish itself. The plan to include Grants Office to clarify the focus of the group and identify funding opportunities is good, and should start as soon as possible.

4. CONCLUDING REMARKS

Please summarise your review and provide a closing statement.

The unit is showing good impact in education and research. To expand, funding is a key. This is of course no surprise. Expanding puts a lot of pressure on the existing staff, in order to secure, or at least make it likely, that funding is secured for future recruitments.



The unit seems to be mature and successful enough to become an internal research environment, together with partners at Örebro University. Furthermore, they would benefit from hosting a mechanical engineering master's program (Swedish: Civilingenjörsprogram i Maskinteknik) with Digitalized product and production development profile. This would support collaboration with local and national industry, as well as ease recruitment for PhD student positions.

Faculty of Humanities and Social Sciences (HS)

ORU2020 Review Report - Criminology

Unit of Assessment: Criminology

Review Team 3: Marie Torstensson Levander (main reviewer), Kajsa Ellegård, Xavier Groussot and B. Guy Peters

1. QUALITY OF THE RESEARCH ENVIRONMENT

1.1 Is the environment well organised to promote quality research?

The Criminology division was established in 2010 and has expanded from one to six (2019) permanent staff members. There are two leading positions. The Unit of Assessment (UoA) is led by a Head of Subject. The Head of Division manages the Criminology division including the courses/programmes on the undergraduate and advanced levels.

The UoA is divided into two research areas with associated research groups and an independent group. The heads of the research groups are all senior PhD's. Four out of six researchers in the UoA are associate professors or full professors. At least three have administrative functions in addition to research and teaching.

The unit is organised in a Board of supervisors chaired by Head of Subject. There are two seminar series: higher seminars and junior seminars (the latter led by a senior PhD).

All PhD's are also teaching at the undergraduate (The Criminology programme) and the advanced level (1-year master). From autumn 2021 a PhD programme in Criminology will be implemented. The UoA has extensive international as well national research collaborations.

Staff-wise the UoA is a small unit but four out of six are senior researchers. This might paradoxically have negative consequences for the research quality. The senior staff shares non-research tasks; teaching, administrative tasks and leadership, making it difficult to uphold focus on research activities at least in periods. That is more or less necessary in order to produce research on a high international level. There is a rather urgent need to expand the number of staff.

1.2 Are the main research areas appropriate for the unit and its development?

The UoA is divided into five main areas of research: 1. *The Development of Criminology-risk and protective factors*, 2. *Biopsychosocial Criminology and Psychology*, 3. *Feelings of unsafety, victimisation and its consequences*, 4. *Stalking and Intimate Partner violence* and finally 5. *Knowledge-based Crime Prevention and Safety Promotion*. The research areas seem appropriate for the UoA and can be further developed and perhaps integrated with criminological research in the social sciences.

Research areas 1 and 2 can be classified as the biological and psychological dimensions of Developmental criminology or Life-course criminology, which are two important research lines in

Criminology. Research areas 3-5 can be placed within Victimology (e.g., the fear of crime studies, the stalking and IPV studies, risk assessments), and Crime prevention including applications of research results (e.g., mapping and measurement of crime and unsafety).

1.3 Please comment on the unit's reflective analysis of their environment.

Do the structures and processes create good conditions for high-quality research with regards to personnel, leadership, academic culture, national and international collaborations?

The small unit with a majority of senior researchers is considered (by the UoA) a strength but also a weakness. As senior, they must take the roles of research leaders and have administrative functions. Involvement in teaching, necessary for the basic funding of the unit, adds to that. This is time-consuming and can have negative effects on research time and quality. It's crucial to have the possibility to recruit new, research-active, staff, which the UoA is aware of.

One specific objective in the UoA is to support staff in reaching and stretching their potential to increase publishing (in high impact journals), create networks and advance their academic promotion. The rules for promotion of associate researchers to professors causes problems to employ the most qualified teachers/researchers. It also causes problems in keeping qualified teachers/researchers. The current research areas are dependent on individuals rather than groups, which makes the unit vulnerable.

Please provide specific comments on the unit's research funding, publications and productivity.

The UoA is active in applying for research funding and have been granted funding from VR, FORTE, other Swedish authorities and the EU. The balance between internal and external funding varies between 24-42% during the period 2015-19. Three of five PhD's were externally funded partially or fully (EU and VR). The longitudinal studies /databases at the UoA but also the Intimate Partner Violence project funded by FORTE provide good opportunities for future funding, PhD-students, research collaborations etc.

The UoA is highly productive in publishing in international journals with peer review systems, but also in books, reports etc. All researchers are teaching, and some teaching time is taken from time destined for research or private time. A trend discussed in the self-assessment is that research is something you do, independent when there is time (evenings, weekends) – as the teaching demands most of the scheduled time.

2. QUALITY OF THE RESEARCH

2.1 Credibility

Does the research environment produce creative and methodologically sound research of high quality? Please identify strengths and weaknesses.

The UoA is productive, and the research is of high quality. Most research is collaborative in authorship with international colleagues in particular but also on the national level. Regarding impact factors, the self-assessment claims that the impact factors are decreasing and that the reason for this is an increase of publications in criminological journals. Such journals have generally lower impact factors. This, that a majority are published in non-criminological journals, is actually a

weakness of a criminological unit. The unit is “young” (just a decade) with a majority of the senior researchers having a background in other research traditions than criminology. To maintain credibility in Criminology, the publication strategy must be to publish even more in criminological journals – even if the impact factors are a bit lower.

Summing up, there has been an increase in co-authorship internationally since 2015. The researchers serve as opponents and members of examining committees, as assessors of applications for positions at other universities and reviewers in relevant scientific journals and organise sessions at international conferences.

2.2 Contribution

Does the research make a contribution to the literature, the field and/or society? Please identify strengths and weaknesses.

The UoA get external research funding in competition and is cited above the ORU mean. The senior advisers are repeatedly invited in national and international contexts, as keynote lecturers, opponents, examiners and promoters of researchers to associate professors or full professors. They are also invited to take part in special issues in peer-reviewed journals, handbooks etc.

A weakness, according to the self-assessment, is that only some of the research lines are internationally recognised. Another weakness is that much of the research is conducted internationally, outside the UoA.

2.3 Communicative

Is the research appropriately communicated to the scientific, professional and lay communities? Please identify strengths and weaknesses.

The members of the unit take active part in international and national conferences, as expert reviewers of reports and research, as lecturers to the government and national authorities. The researchers are active in collaboration with the surrounding society in R&D projects, evaluations and prevention initiatives and discussions. They regularly communicate research results in media, on national level as well as in local media. There is a tendency that especially the participation in conferences take place in areas outside the core of criminology, e.g., forensic psychiatry and behavioural genetics. This is also demonstrated by their attached publications.

2.4 Conforming

Are there sufficient routines for ensuring conformity with standards for ethics, sustainability and other regulations?

The members of the UoA seem to be aware of the ethical rules. They work together in discussing the risks and how to handle these. The PhD students are involved in applications for ethical permissions. Ethical and other regulations are discussed in the research groups, in seminars and for the future there are plans to introduce seminars with focus on ethical issues.

3. THE UNIT'S DEVELOPMENT PLAN

Please provide feedback as a *critical friend*. The focus should be on how the unit may best develop its research and enhance quality over the next 5-year period.

3.1 Observations and analysis

Please provide observations, reflections and analyses regarding the unit's development plan. You should include relevance of the plan (Is the plan realistic with a focus on an important and clear path forward? Are there sufficient resources and organisation for meeting the unit's goals?) and highlight strong areas that can be enhanced as well as areas in need of development.

The plan for the future contains a number of relevant goals, and strategies and activities to reach these goals. The core in this plan is to increase the number of research publications, applications for external funding, collaborations and research staff with a PhD degree. A specific goal is to increase the number of publications with a member of the unit as first author. This refers to the fact that the researchers in the UoA often collaborate with external researchers with main responsibility for the projects and publications and hence often are first authors at publications. After writing the self-assessment, the UoA got the rights to examine PhD students in Criminology, a fact that may strengthen the research efforts in the unit but also imply more work for the senior researchers.

However, there are several issues to be solved related to the goals and the 5-year plan. It is not realistic to increase the workload for the current staff even more and especially if they shall implement and run a PhD programme and at the same time continue to increase productivity and maintain high quality. The recruitment of criminologists with a PhD degree in Sweden is not an easy task (as we are sure that the unit is aware of). In the long run the PhD programme may remedy this. We do not suggest that the unit shall stop the plan to expand and increase, but rather to develop a careful strategy for fulfilment of recruitment of staff with appropriate skills and professional profile.

3.2 Recommendations

Please provide suggestions for what the unit should focus on and how improvements might best be realised.

- There is a need for a definition of the core of the research profile at the UoA: either to further increase the quality of your current research areas or to address research questions outside your current profile. This may be important when you start the recruitment of PhD students. An alternative is to further develop the research areas in a cross-disciplinary direction. Such an approach could include, among others, criminologists from the social sciences and thereby stimulate new research questions and perspectives as well as methodological issues.
- A detailed plan in terms of the staff profile reflecting the progression of existing staff and the recruitment of new staff, would benefit future planning for recruitment activities as well as projections for research activities and outcomes.
- A strategy to protect research time. This should involve a strategy for optimising external funding, tracking applications (successful and unsuccessful), oversights of teaching



responsibilities and their distribution among the staff to monitor the allocation of research time and the encroachment of other responsibilities.

- The system of promotion must be discussed between the UoA and the Faculty. To allow the development of the UoA, 1 position of a full professor should be advertised if the promotion rules are not revised.

4. CONCLUDING REMARKS

Please summarise your review and provide a closing statement.

Criminology at ORU is a small unit which have developed rapidly since 2015. The unit is characterised by high ambitions and the staff is active and successful in establishing collaborations, publishing and applying and granted for funding. The UoA is part of the Criminological division which runs a successful BA programme in Criminology, a master programme and from next semester also a PhD programme. The plan for the future contains more publishing, more applications, more funding. Such a plan must be supported by the recruitment of more staff members if the high quality of the research shall be maintained. Another issue concerns the balance of time between teaching, administration and research. Hence, an increased number of staff positions and carefully recruitments in line with the suggestions above is necessary.

ORU2020 Review Report - Education

Unit of Assessment: Education

Review Team 1: Roger Säljö (main reviewer), Harriet Silius, Ulla Runesson Kempe and Magda Pieczka

1. QUALITY OF THE RESEARCH ENVIRONMENT

1.1 Is the environment well organised to promote quality research?

Education has been part of Örebro University (ORU) for a long time and is well known nationally and internationally for its research. At the same time, it is obvious that the Unit of Assessment (UoA) has a heavy teaching responsibility, and that this commitment, in some respects, currently takes priority in the daily activities and in the strategic planning including recruitment of staff.

1.2 Are the main research areas appropriate for the unit and its development?

The UoA describes itself as organised in four research units (Education and democracy, Environmental and sustainability education, Children's education, and Special education). These areas seem appropriate in the broad and diverse research territory of educational research. Even though the main activities in these groups are described at a generic level, it is not clear from the documentation how the groups operate and are held accountable for their activities (applications, publishing etc.) by the leadership.

Furthermore, the description of research units, research groups and research topics is somewhat unclear. There are four research units, but in the self-assessment there are six "main areas of research" (p. 2) pointed out, and on p. 3 it is mentioned that these "main areas" include research on some 20 topics (which appear very diverse). Consulting the webpage of the UoA, there are nine different "research groups." In addition, in the self-assessment, the term "research environments" is used for some of the comparisons with other units at ORU. The review team would encourage the UoA to find ways of clarifying the terminology when describing the research activities to make the structure and responsibilities more transparent.

1.3 Please comment on the unit's reflective analysis of their environment.

Do the structures and processes create good conditions for high-quality research with regards to personnel, leadership, academic culture, national and international collaborations?

The self-assessment gives an open and substantive account of the strengths and current challenges of the research environment. It is obvious that the UoA is successful in attracting external funding and that the publication activities have increased during the evaluation period. The increasing enrolment of PhD students, made possible largely through local OrU funding, has contributed to strengthening research and research training.

At the same time, it is obvious that there are challenges in central areas such as recruitment, publishing and in managing the balance between research and teaching. A strength in the report is

that the symptoms of these challenges are analysed, for instance when it comes to gender issues in publishing and combining research with extensive teaching responsibilities. While the review team was impressed with the efforts made by this research unit in clarifying the challenges, the work of converting these analyses into a clear roadmap for the future remains to be done.

Please provide specific comments on the unit's research funding, publications and productivity.

It is obvious from the documentation that the UoA has had a clear growth in funding for research over the past five years, from about MSEK 13,6 to MSEK 21,1. The funding has increased both through external and faculty funding. This positive trend must be maintained.

2. QUALITY OF THE RESEARCH

2.1 Credibility

Does the research environment produce creative and methodologically sound research of high quality? Please identify strengths and weaknesses.

There is a positive trend in the publication patterns, both in terms of quantity and quality. The publication number has tripled since 2013, and an increasing proportion of articles appear in recognised journals and book series. The proportion of international publishing has also increased following a similar pattern. This is a clear sign of soundness of research.

2.2 Contribution

Does the research make a contribution to the literature, the field and/or society? Please identify strengths and weaknesses.

The UoA has had a strong impact nationally and internationally in research on themes such as democracy, citizenship and education, curriculum theory, sustainability and education, history of education, inclusion and some other fields.

2.3 Communicative

Is the research appropriately communicated to the scientific, professional and lay communities? Please identify strengths and weaknesses.

The research of the UoA is mainly orientated towards academic audiences and the public sector. Much of the research concerns issues that are immediately relevant for education and teacher education, and results are communicated in relevant journals. A few scholars have published research-based textbooks, which serve as course literature at universities. However, for both types of publications, some scholars, predominantly male and relatively senior, dominate. In addition, the UoA comments on the finding from the bibliometric analyses that a relatively large proportion of the research publications produced receive few or even no citations. This issue must be analysed further by the leaders.

2.4 Conforming

Are there sufficient routines for ensuring conformity with standards for ethics, sustainability and other regulations?

Issues of ethics of research and sustainability are given considerable attention. Sustainability as a challenge for education is an important research area, and the documentation provided indicates that research ethics is taken seriously both in PhD training and in research, for instance when studying children.

3. THE UNIT'S DEVELOPMENT PLAN

Please provide feedback as a critical friend. The focus should be on how the unit may best develop its research and enhance quality over the next 5-year period.

3.1 Observations and analysis

Please provide observations, reflections and analyses regarding the unit's development plan. You should include relevance of the plan (Is the plan realistic with a focus on an important and clear path forward? Are there sufficient resources and organisation for meeting the unit's goals?) and highlight strong areas that can be enhanced as well as areas in need of development.

The self-assessment is open and frank and elaborates on the challenges of the UoA. The review team wants to comment on some issues.

1. *Recruitment A.* The problems here are different but perhaps interconnected. Current recruitment initiatives prioritise finding teaching staff with a PhD and relevant competence given the teaching responsibilities. This is a common problem in departments with an extensive teaching load. A consequence is that research is given less attention, which, in turn, at a later stage will have implications for the quality of teaching at several levels; the UoA will be less attractive as an academic context for research-oriented PhDs, and the staff will have too little time for research.
2. *Recruitment B.* Other elements that are important to address concern the relative lack of international staff and the homogeneity of researchers in backgrounds (except PhDs). The UoA argues that it is difficult to recruit internationally given that teaching is in Swedish. This again illustrates how teaching duties define the dynamics of the most important feature of a department, the recruitment pattern.
3. *Tension between research and teaching.* This is the major dilemma that the self-assessment points to when understanding how the UoA develops. Time devoted for research becomes fragmented. Measures must be taken to protect research and to securing longer periods for research work. Some staff have difficulties identifying with a research group. Measures must be taken to integrate all staff members in a research unit.
4. *Publishing.* The UoA makes a thorough analysis of current challenges. A limited number of scholars produces most of the publications, and there is an obvious gender imbalance, male scholars are more active than female. In addition, too many of the publications receive no or few citations, and, thus, are not visible in the international research community. A further emphasis on collaborative research and co-writing and a careful analysis of patterns of publishing are ways to address these issues, including the gender imbalance. Here the leaders of the research units have an important role to play.

3.2 Recommendations

Please provide suggestions for what the unit should focus on and how improvements might best be realised.

1. *Research units.* The UoA should give a clearer and more convincing presentation of how research is organised, what role the research units play in developing the research agenda, and, equally important, how these units are held accountable for their activities. The review team recommends annual meetings with the research units, where the activities of the year are discussed, and where shared plans and visions for the future are formulated (responsibility: leaders of UoA and research units).
2. *Recruitment A.* Here some avenues need to be explored:
 - a. The UoA is in need of scholars at the postdoctoral level with a strong research agenda. (responsibility: Faculty and UoA).
3. *Recruitment B.* International recruitment must be emphasised by:
 - a. Increasing faculty and UoA support for postdocs and assistant lectureships advertised internationally. (responsibility: Faculty and UoA).
 - b. Internationalising the teaching responsibilities by co-teaching courses at the PhD level with other universities and by giving courses at the master's level in collaboration with other UoAs at ORU and with other universities. (responsibility: Faculty and UoA).
4. *Tensions between teaching and research.*
 - a. The annual planning of staff duties must allow members of staff to have continuous time to engage in research. These "research periods" should be a minimum of three months. They may not be available every year for all staff, but given the funding structure of the positions (about 70 per cent teaching), and the availability of external funding, such a scheme is realistic.
 - b. To achieve this, the UoA would have to scrutinise its teaching practices and make sure that what is offered is within the overall commitment to balancing the needs for teaching and research.

4. CONCLUDING REMARKS

Please summarise your review and provide a closing statement.

The UoA is at an important stage having carried out this in-depth assessment. Important dilemmas and challenges have been identified, while the roadmap for the future is still rather vaguely described. While acknowledging the significance of the ambition to maintain its strengths, the review team felt that the vision of how research could be developed and research culture could be strengthened was lacking. The review team considers it a good idea to invite a temporary advisory board with a few experienced scholars for a "research evaluation session" (of a day or two) annually during the next three years. Here, the research units and the leadership would present their scholarly achievements and visions, and they would receive strategic advice.

The review team would like to offer the following specific reflections:

1. The strategy of seeking more varied funding sources must be further developed.
 - a. There is a broad range of central funding agencies that should be approached.
 - b. A trend in educational and social science research is to develop praxis-related research. These lines of collaboration with various agencies, which seem to be there to some extent at OrU, should be developed further.
 - c. There is some evidence of EU-funding, but increasing visibility in international collaborations is vital.
 - d. The UoA has a qualified staff with four professors and four docents in a staff of 31 academics. This proportion matches, or is higher than, what would be found at other Swedish universities. Given this level of scholarly competence, there appear to be opportunities for increasing external funding.
 - e. Co-publishing between senior and junior researchers should be systematically encouraged.

ORU2020 Review Report - Gender Studies

Unit of Assessment: Gender Studies

Review Team 1: Harriet Silius (main reviewer), Roger Säljö, Ulla Runesson Kempe and Magda Pieczka

1. QUALITY OF THE RESEARCH ENVIRONMENT

1.1 Is the environment well organised to promote quality research?

The Unit of Assessment (UoA) sees itself as a significant player at national and international level in the area of gender studies and the Team concurs with this view. Within the main research area of Gendered Knowledge Production, three larger environments are active: Gender in Science and Academia, Critical Studies on Men and Masculinities and Violence Studies. The UoA has a strong, coherent identity rooted in social science oriented feminist theory and has a shared research programme. The UoA is successful at identifying opportunities for collaboration both in the Nordic research environment, and, more significantly, at the international level. The very integrated unit has reached excellence on international level by its internal work practices and external collaborations. As such, it is open to interdisciplinary collaborations within the university and to contribute to the brand of Örebro University. However, the small size makes it vulnerable and not visible nor recognised within the university in proportion to the research achievements.

The academic culture, including all staff and PhD students, as well as visiting scholars and PhD students, is sustainable enough to counterbalance changes in staff, but needs more resources to maintain a prosperous environment. Given the excellence of Gender Studies in research funding, the Team finds the number of PhD students low. With respect to the attraction of PhD positions, i.e. more than 140 applicants in recent recruitments, there is a clear societal demand for PhD positions. The labour market in Sweden for PhDs in Gender Studies as testified by the Unit is both large and broad. As a unit, Gender Studies is dependent more on successful external research funding, and less on the balance of teaching and research in faculty funding. However, the UoA would benefit from a larger share of teaching.

1.2 Are the main research areas appropriate for the unit and its development?

As a research unit, Gender Studies builds on a number of strengths and an impressive tradition. It is since long an important player with good standing at the international level in research on gendered knowledge production and on men and masculinities. The UoA has significant experience in research development and has identified innovative directions for academic development, e.g. in the fields of gendered violence and gendered politics with focus on work. The Team regards this direction to be most topical and timely. The Team is persuaded that the UoA has the capacity to make good decisions about additions to its research agenda. For continuous success, the UoA needs to capitalise its international heritage and strengthen the research on politics and work. Because of scarce resources and transitions at professorial level, the unit has recognised the need to secure its academic footing by developing more teaching at undergraduate and master's levels. The Team agrees with this need.

1.3 Please comment on the unit's reflective analysis of their environment.

Do the structures and processes create good conditions for high-quality research with regards to personnel, leadership, academic culture, national and international collaborations?

Given the size of the Unit and the research conducted, the Unit seems to be able to provide good conditions for high quality research in the wide field of gender research. There is continuous effort to maintain and improve good conditions for members of the Unit, particularly significant in view of the fact that a high proportion of the membership is on time-limited or fractional contracts. The unit has consistently, and very successfully, worked on building international connections and membership in relevant networks. Gender Studies has benefitted from what appears to be excellent academic leadership and prospects of this to continue in future.

The research unit has very impressive networks and projects but seems in the present transition period to lack resources for sustainable environment building and administrative support for maintaining a high level of research output. During 2015-2017, Gender Studies received strategic support for the GEXcel Collegium, which was likely to boost the capacity building in research collaboration. As collaboration grew, financial support did not continue.

As the research staff is rather small (ca 6 FTE), Gender Studies is vulnerable, making leadership crucial for cohesion. With too many small research projects, the risk of heavy administrative work grows. The academic culture at Gender Studies resembles very much the one you find in most gender studies milieus in Europe. Building on this feminist culture, there are no risks of drawbacks in the future. The wide and strong collaborations have viable traditions and the Team is convinced that the UoA will be able to sustain its position.

Please provide specific comments on the unit's research funding, publications and productivity.

The UoA is excellent both in output productivity and in securing external funding. It has a good balance between internal and external funding (50/50). The unit wants to keep this balance, which seems to be a desirable goal. The publications and productivity, evidenced in the Bibliometric report, is outstanding. During the assessment period, it has risen from 2.9 in 2015 to 4.3 in 2019. The admirable figures are still more impressive as the publications have appeared in very high ranked books and journals, mainly in the international arena. Among the strengths to achieve its success, the unit mentions support activities organised for academic writing and publishing, the very strong experience of editorial work and frequently used co-authoring. Among them, the editorial experience is unique.

2. QUALITY OF THE RESEARCH

2.1 Credibility

Does the research environment produce creative and methodologically sound research of high quality? Please identify strengths and weaknesses.

There are several proofs of the credibility of the quality of research at Gender Studies. The research is published in recognised peer reviewed journals and books by high quality international publishers. The journals include over ten of the most distinguished ones. In addition, publications appear in

general academic journals in the field of social sciences. Very convincing of credibility is the book series Routledge Advances in Feminist Studies and Intersectionality, initiated by the GEXcel group with 36 books and co-edited from Gender Studies. The UoA has been successful in obtaining both Swedish competitive research funding (SRC, Forte, Vinnova) and European money (EU framework programmes, ERA-net, ERC). Noticeable is also the high number (over 40) of visiting international scholars from 20 countries in Europe, Asia, Africa, North America and Australia. The international commissions of trust include e.g. elected board memberships, invited expert tasks, scientific advisory assignments, peer reviews, etc. Further evidence are the 25 PhD examinations in 12 countries. In sum, credibility is on an unusual, outstanding level.

2.2 Contribution

Does the research make a contribution to the literature, the field and/or society? Please identify strengths and weaknesses.

The particular contributions in the field are to the literature, especially in research on gender in academia, and on men and masculinities. Gender Studies at ORU is among the world leaders in these areas. Literature and field overlap. Thus, contributions to literature also have high impact in the field of gender studies. The contributions to society are extensive. They include expert advice with impact on organisational policies and organisations. Gender Studies collaborates both nationally and internationally with business corporations. Among the strengths observed, the Team found editorial responsibilities, which amount to five co-edited books, seven co-edited journal special issues and membership on 20 journal editorial boards, and the above-mentioned Routledge book series (15 volumes 2015-2019). The number of journal peer reviews is unusually high, more than 60. Peer reviews also encompass assessments for publishers. Of special importance are several expert review tasks for professorship.

2.3 Communicative

Is the research appropriately communicated to the scientific, professional and lay communities? Please identify strengths and weaknesses.

The Unit is strong in communicating with the relevant academic community but is also active in engagement with the wider audience, for example with the regular annual event with parliamentarians in Gender Dialogue, since 2009. Gender Studies contributes to media by disseminating research, e.g. on gender-based violence and through popular science. Local and national outreach activities are organised on regional level, e.g. with industry. On international level, men's mental health issues in the EU are disseminated in the WHO Health Evidence Network. National expert assignments, which impact on policy development and legislation, include e.g. themes such as sexual violence and prostitution; honour-based violence; gender in European research policy; and initiatives on gender equality and gender mainstreaming. According to the Team, it would be beneficial for the Unit to put more effort into enhancing the visibility of its research within the university.

2.4 Conforming

Are there sufficient routines for ensuring conformity with standards for ethics, sustainability and other regulations?

The Team has no concerns on these points. The practices are relevant, appropriate and satisfactory. The field of Gender Studies is characterised by an extensive tradition of ethical exploration and

debates. Ethical codes of conduct and clarifications regarding the role and responsibility of researchers are regularly discussed in the UoA. The research conducted contributes to academic discussions and knowledge production on research standards, ethics, sustainability, equal opportunities and social justice. Diversity, intersectionality or equality and sustainability have also been thematic foci in several research projects.

3. THE UNIT'S DEVELOPMENT PLAN

Please provide feedback as a critical friend. The focus should be on how the unit may best develop its research and enhance quality over the next 5-year period.

3.1 Observations and analysis

Please provide observations, reflections and analyses regarding the unit's development plan. You should include relevance of the plan (Is the plan realistic with a focus on an important and clear path forward? Are there sufficient resources and organisation for meeting the unit's goals?) and highlight strong areas that can be enhanced as well as areas in need of development.

The Team endorses the Unit's focus on the specific support areas articulated in the plan: critical mass, working conditions, and administrative support. This also applies to the UoA's intention to continue its effort on consolidation of the research environment. The Unit has shown the need for more academic and administrative staff as well as new PhD positions. It would also benefit from a larger teaching engagement and more collaboration within ORU.

3.2 Recommendations

Please provide suggestions for what the unit should focus on and how improvements might best be realised.

1. Given the research strengths of the UoA, the recognition of the attractiveness of degrees in Gender Studies in the market place, and, finally, the need to change the funding basis for the unit's existence, the Team would welcome a clear strategic approach to developing high quality courses in diverse areas of teaching at ORU. For example, the unit should consider developing joint international Masters Programmes, in collaboration with other units at ORU, in areas where gender could be an essential feature.
2. The Team finds a need for more detail about the future development in substantive terms. An explicit research programme may enhance the consolidation work. There is a need to make the obtained research production and the forward-looking plans visible and known at both faculty and university level. For maintaining its international orientation, the UoA might consider using external advisors.
3. Finally, Gender Studies is in immediate need of strategic resources to reach more optimal conditions for a financially stable platform from which to develop its larger teaching commitment and the consolidation of its research programme.



4. CONCLUDING REMARKS

Please summarise your review and provide a closing statement.

Gender Studies is different from the others that the Team has evaluated in being research-heavy, which makes it vulnerable in the present funding system. The Team considered Gender Studies as a very productive and both academically and societally important unit for the University. It is hampered by its small size, heavy dependence on external funding, and consequently, few permanent positions, which prevent a larger contribution to the University as a whole and the surrounding society. The above recommendations and the UoA's own suggestions form a productive platform for solving the present challenges.

ORU2020 Review Report - Human Geography

Unit of Assessment: Human Geography

Review Team 3: Kajsa Ellegård (main reviewer), Marie Torstensson Levander, Xavier Groussot and B. Guy Peters

1. QUALITY OF THE RESEARCH ENVIRONMENT

1.1 Is the environment well organised to promote quality research?

The organisation described in the self-assessment functioned well after the turbulence caused by the University's decision (in the early 2010's) to cancel the previous interdisciplinary research group organisation and the introduction of a "new" order with traditional discipline-oriented evaluation units. The unit's organisation is still the same. It is lead in a "familial", inclusive mode, appreciated by the employees. During the period after 2015 there was a retirement and recruitment of new senior lecturers.

Since budget revenues, and thereby employment of staff, of most ORU units strongly depends on engagement in teaching, launching the undergraduate program "Urban and Regional Development" in 2015 was decisive for the unit's survival. All researchers/teachers were involved in this development, and all of them share the massive teaching volume, leading to an unbalance between hours in teaching and research respectively. The unit's organisation mirrors the above-mentioned situation back in time.

Now the unit works well and has developed and stabilised after the ORU reformation and it is due time to take the next step in its evolution, including realisation of its plans for new employments and increasing external and formal collaborations, and, of course, increased efforts to get external funding and publish.

This claims for a more structured and formalised organisation of the unit's strategic discussions, management and administration. In addition, engagement in ORU's decision-making organs can strengthen the unit's position.

1.2 Are the main research areas appropriate for the unit and its development?

Unique to human geography, and what makes it well suited for urban and regional planning, is its anchoring in how human activities are coupled to the physical world and the geographical outcome at different places of these human activities over time. The research in the unit serves well for this purpose. The main research areas of human geography in ORU also play very well with the themes of the undergraduate program. This implies a close and important connection between research and education. All senior researchers teach.

Human geography is a broad subject, focussed on socio-spatial issues often intersecting with other social sciences. Therefore, it is beneficial for human geographers to collaborate with other disciplines, and the unit collaborate with other disciplines, for example in “Master education and research”.

1.3 Please comment on the unit’s reflective analysis of their environment.

Do the structures and processes create good conditions for high-quality research with regards to personnel, leadership, academic culture, national and international collaborations?

Please provide specific comments on the unit’s research funding, publications and productivity.

The reflection on structure and processes relates to the current situation, and the self-assessment underlines that the unit is small, familiar and non-hierarchical. This was confirmed in the interviews. The unit’s structure, its organisation, academic culture and leadership has so far supported good research, given the small scale. The unit’s publication record has improved from a low level, at the same time as the new undergraduate program was developed and started. The unit has managed to tackle some staff turnover; one position after retirement of a senior lecturer was managed by recruitment of two young lecturers; and there is, of course natural circulation of post doc researchers.

Now, the unit plans to scale up and start deeper collaboration with external organisations. This new situation claims for more structure and systems in the organisation of the responsibilities and leading the activities within the unit and managing the responsibilities for collaboration with external parties. This was not reflected in the self-assessment.

Not either reflected in the self-assessment is what research profile within the broad subject of human geography that the unit further will concentrate on. Since the unit still is small, priority ought to be given to research issues with the socio-spatial focus that the academic staff finds most beneficial for both research and teaching.

The unit has little external research funding, however, the funding body is larger than what the ORU2020 documents reflect since the unit has been successful in getting financing from funds not included there, like RJ, KSLA and Örebro municipality.

The researchers have, during the past few years built up the well-functioning undergraduate program Urban and Regional Planning. This took a lot of time and engagement from the small group of researchers/teachers. The success of this activity was decisive and necessary for the unit’s survival and, therefore, there was too little time for research, including applying for funding and publication activities. Towards the end of the period 2015-2020 activities to publish and apply for funding have increased, resulting in improved publication records.

The young researchers have developed a new strategy, aiming at getting seed money, to prepare for applications from larger funds. This strategy seems promising. The number of publications is still quite small, but most articles are published in well-respected journals. It must be underlined that the quality of publications is not in the quantity of publications, but rather in originality and novelty of empirical findings.

2. QUALITY OF THE RESEARCH

2.1 Credibility

Does the research environment produce creative and methodologically sound research of high quality? Please identify strengths and weaknesses.

The credibility of the research is of high quality. Its strengths relate to collaboration in authorship with international and national colleagues and publishing in high quality journals. There has been an increase in co-authorship internationally since 2015. The researchers serve as opponents and members of examining committees, as assessors of applications for positions at other universities and reviewers in relevant scientific journals and organise sessions at international conferences. The unit's researchers are well integrated in the scientific community of human geography.

There is room for increasing the visibility of the unit. This applies for more publications in high quality journals, for being first authors of journal articles and for developing the credibility culture by becoming more visible; for example, by inviting more guests and arranging seminars in Örebro with academic external participants (like conferences).

2.2 Contribution

Does the research make a contribution to the literature, the field and/or society? Please identify strengths and weaknesses.

There is a good and relevant contribution to literature and to society. One article attached to the self-assessment is an example of an interesting participation in the international debate in the field of economic geography regarding gender issues. This contribution strengthens the credibility dimension. Other strengths relate to the empirical research, making the situation in Swedish urban planning (for example urban segregation, regional re-industrialisation, green growth in various local environments, migration to previously de-industrialised regions and effects on urban development from public housing policy), known in the international scientific society.

2.3 Communicative

Is the research appropriately communicated to the scientific, professional and lay communities? Please identify strengths and weaknesses.

The unit plans to establish itself at the larger scale, recruit more researchers/teachers and to develop the collaboration with Dalarna University further. In the wake of such growth, the unit would gain from organising conferences in human geography, for example the Nordic Geographical Meeting (NGM). This would increase the communicative activity and make the unit more visible in the scientific society.

The unit also is active in communication and collaboration with various organisations in society, for example Region Örebro län, Örebro municipality and SKR. This seems to work well and both research and teaching are relevant for the society. The plan to enlarge the unit by recruiting more research/teaching employees gains from this communication and collaboration, which grounds for opportunities for co-funding position(s), for example second professorship.

All researchers in the unit are deeply involved in teaching, which becomes a limitation for arranging scientific events, since teaching has high priority. This is one consequence of the unbalance between

number of employed researchers/teachers and educational involvement. To put it simple: the sum of the time for teaching and time for research exceeds the total work time limit. The result is unbalance between staffing and time for performing the necessary tasks. The conclusion is that there is a need for recruitment already today, and if the unit is more successful in getting external funding, this will be even more urgent, so that all teaching can be performed by qualified academic staff (not temporal employees).

2.4 Conforming

Are there sufficient routines for ensuring conformity with standards for ethics, sustainability and other regulations?

The unit seems to be well aware of research ethics, equal opportunities and encourage employees to align with them. One problem lifted by the unit is the issue of storing data from studies grounded on qualitative methods.

3. THE UNIT'S DEVELOPMENT PLAN

Please provide feedback as a critical friend. The focus should be on how the unit may best develop its research and enhance quality over the next 5-year period.

3.1 Observations and analysis

Please provide observations, reflections and analyses regarding the unit's development plan. You should include relevance of the plan (Is the plan realistic with a focus on an important and clear path forward? Are there sufficient resources and organisation for meeting the unit's goals?) and highlight strong areas that can be enhanced as well as areas in need of development.

The development 5-years plan contains five integrated points. They are highly relevant and have a forward-looking direction: to grow in number of active researchers/teachers and PhD students (including applications to Docent to meet the standards of ORU for PhD education); growth in publications in high profile journals; more efforts to enhance research capacity through successful funding applications; and deeper and increased collaboration with external parties, especially Dalarna University.

However, the plan lacks a discussion about the need to develop a structure for organising and leading the unit when it grows and increases its collaborations with parties outside ORU. Such a point ought to be integrated to the 5-year plan.

It would also be beneficial if the academic staff in its internal policy discussions could specify more concretely how to and in what research areas, they aim to lay their efforts to secure more external funding. Even if the subject is broad, the number of academic employees is still limited and a unique and novel profile would gain the fulfilling of the plan.

Once there are more academic employees in the unit, its further development would gain from engagement in decision-making bodies of ORU.

3.2 Recommendations

Please provide suggestions for what the unit should focus on and how improvements might best be realised.

The unit is in a generational transfer situation. The 5-years plan includes actions with realistic opportunities to realising it, given that at least one of the two applications to Docent is agreed. So, the main recommendation is to follow the plan with its integrated points, but not enough. One suggestion is to integrate one more action regarding the organisation and management of the unit when it grows. Another suggestion is to identify what research profile the research should concentrate on and strategically orient applications in that direction. Yet another suggestion is to engage more in ORU's decision-making structure.

Collaboration with human geography in Dalarna University will help the unit grow in numbers and take PhD student recruitment to a new level. Once this collaboration is stable, the unit might also consider deeper collaboration with one or two other human geography units at other Swedish universities. This could situate the unit and its research orientation in urban and regional planning and make it more visible.

To become an attractive partner for more national and international collaborations, one suggestion is that the unit arranges international and national conferences in human geography/urban and regional planning (like the Nordic Geographers Meeting).

Another opportunity is to offer PhD courses in the national PhD course program. Herein, courses are offered by two or three Swedish human geography units in collaboration, which make the arrangement a base for mutual learning, experience and scientific socialisation.

The plan to recruit a second professor with a mix of internal ORU-funding and external funding from regional parties will strengthen the unit's position from an empirical and scientific development perspective. Such a professorship, with its new networks, would also create an interesting footing for developing the educational program in Urban and regional development and eventually a Master's program.

4. CONCLUDING REMARKS

Please summarise your review and provide a closing statement.

Today, the Human Geography unit is small and it has developed strongly since the previous evaluations. The academic staff has developed and launched a successful educational program in Urban and Regional Planning. The ORU2020 process has played an important role to encourage the unit to make up a plan for its future development. The plan is realistic and contains crucial actions for growing into a larger unit (in terms of employed academic staff and collaboration with human geography in Dalarna University) including a plan for replacement in coming retirement processes; goals for publishing and strategies for high quality applications to funding organisations. The self-assessment is honest, with reported strengths and weaknesses.

One weakness, however, is not recognised, maybe because what works well now is hard to put into question. It concerns the much appreciated familial organisation of the small unit. There is a need



for a more structured and systematic organisation of the unit when it grows and increases its external collaborations. This should be considered by the unit.

One of the most urgent issues concerns the balance of time between teaching and research. There is a problem when there are too few academic employees to manage the main tasks research and teaching with decent work conditions. Teaching is the fundament for funding employments, external funding is important to contribute to the scientific society (for example publications, conferences). Each unit needs opportunities to fulfil its tasks in both teaching and research, and therefore a recommendation is that the number of academic employees match the time required for doing this. There is a risk (caused by the understandable reason that the quality of undergraduate teaching must be high in order to get the fundamental funding for the unit) that too much time is put into teaching and too little into research. A thorough investigation about how to manage this and create a balance in time between research and teaching would be welcome!

ORU2020 Review Report - Legal Science

Unit of Assessment: Legal Science

Review Team 3: Xavier Groussot (main reviewer), Marie Torstensson Levander, Kajsa Ellegård and B. Guy Peters

1. QUALITY OF THE RESEARCH ENVIRONMENT

1.1 Is the environment well organised to promote quality research?

The Legal Science Unit is one of the units at the School of Law, Psychology and Social Work. It resorts from the self-assessment report that it is composed of 28 researchers. During the interviews, it was also mentioned that the Division is composed of around of 50 employees meaning that many of the member of the academic staff are involved only in teaching obligations with no research obligations and some of the teachers do not have a PhD in law. The teaching burden is heavy with two undergraduate programmes and one third cycle programme. All the senior researchers (excluding the professors) have 70% teaching obligations. Five professors are appointed. Two of the professors teach 20% and the other three professors 50%. Yet it is highlighted that these three professors have also other administrative assignments that reduce their time for research and/or teaching.

The teaching obligations may be reduced depending on the internal and external funding. However, as expressed in the report, due to the large number of teaching hours, it is in practise a challenge to actually ensure sufficient time for research, even if its internally or externally funded. This heavy teaching obligation constitutes a clear hindrance to the development of a qualitative research environment. Historically, the legal science unit won the examination right for the full law programme, the ties with Stockholm University were strong. Many members of the academic staff were recruited from Stockholm without moving to Örebro. Nowadays the ties to researchers in Stockholm are still strong even though the recruitment base has widened to include researchers from many universities within and outside Sweden. This diversification of the recruitment is good for the qualitative development of the research environment and should be continued.

In the last years an attempt was made to recruit an Associate Senior Lecturer in law which failed since the position was advertised too broadly leading to too many applications and that one of the external assessors never delivered the evaluation. This is a true pity since this type of positions are particularly appropriate to develop the quality of the research environment.

The legal science unit collaborates in a research school with Linköping University, Karlstad University and the University of Gävle. This is lucidly described in the report as a win-win situation. The Unit has four fully funded PhD students.

The research environment has five sub-units: Tax Law, Procedural Law and Criminal law, Public International Law, Private Law and Constitutional Law (including European law and comparative constitutional law). Four out of five sub-units are connected to a Professor. The Public International Law sub-unit is not linked to a Professor. It appears from the report that it is structurally difficult to

promote a senior researcher to become Professor due to the strict policy of the Faculty vis-à-vis the Unit. This problem is general within the Faculty and is not specific to the legal science Unit. It constitutes a hindrance to the qualitative development of the research environment since it does not offer a career prospect in Örebro to potential talented researchers interested to be promoted to a professorship.

1.2 Are the main research areas appropriate for the unit and its development?

According to the report, there is no specific focus area for the research conducted, but the Unit of Assessment (UoA) covers almost all areas of law in the research. This is how law faculties traditionally carry out their research and it reflects the competence that are required to provide high quality education. The research areas where the UoA has professors are logically the areas which publish the most. It is worth noting that tax law research area produces close to 32% (125 publications) of the overall publications (388 publications) whereas Tax Law, Private Law and Procedural Law (248 publications) covers more than 64% of the overall publications of the UoA. This show and constitutes an important disproportion in publications between the different research areas. It is generally quite rare to see Tax Law as being the top research area in a legal science unit. Finally, the number of publications as to the production of the various research areas also show that the research areas which are the most appropriate for the unit and the development of its research environment are the research areas having a full professor.

1.3 Please comment on the unit's reflective analysis of their environment.

Do the structures and processes create good conditions for high-quality research with regards to personnel, leadership, academic culture, national and international collaborations?

The UoA is fully aware of the many challenges facing it to develop its research environment. This awareness was also confirmed during the interesting and in-depth interviews/discussions held online in April. The quality of the research environment highly depends on a good recruitment and also ensuring its sustainability by keeping the best researchers in Örebro. As rightly put in the report, the working conditions need to be improved to attract new lecturers and professors to Örebro and to maintain the current academic staff. Examples of such incentives are sabbatical, higher salaries and more full professorships. During the interviews, it was explicitly expressed that 2 to 3 new professors are particularly needed in the UoA. This need is legitimate by looking at the structure of the UoA, divided into five sub-units and 11 research areas. However, it resorts clearly from the report and the discussion that the fact that it is not possible to be promoted to full professor at Örebro University leads to associate professors leaving and makes it difficult to recruit associate professors. It appears clear that the system of promotion at the Faculty level constitutes a hindrance to the development of the quality of the research environment of the UoA. If the system of promotion is not reformed (or at least interpreted in a less restricted manner) at the Faculty level it will be inevitably lead to the non-development of the quality of the research environment.

Another way forwards also expressed in the report of the UoA would be to educate more doctoral students, and thereby produce own academic staffs using a bottom approach in addition to the previously described top-down approach. This way forward is fully logical and should be implemented. It is not viable to have only 4 PhD students for the UoA. The numbers of PhD students must be substantially increased in the future to secure and develop a research environment of high quality at local and national levels. The UoA views the structure of the leadership as very efficient and considers the academic culture as lively and of high quality. There is absolutely no reason to

doubt this in light of the UoA report and the interviews. All the good work should be continued here with an aim to develop even more the 'culture of seminars' which is essential for ensuring the high quality of the research environment. All in all, it resorts clearly that the problematic issue when it comes to the development of a good research environment of the UoA lies mainly in ensuring a sustainable policy of recruitment with qualified and motivated researchers interested to develop a strong research environment in Örebro.

Please provide specific comments on the unit's research funding, publications and productivity.

Compared to some other UoA of the Faculty (that appear to employ less full professors than the legal science Unit), the external research funding is not very successful. According to the report, it is stated that it is difficult to find time to prepare good research application with uneven distribution of teaching obligations and administrative work. A good research environment can only develop with an increase in external research funding. It is important that time is allocated to researchers to draft competitive research applications. The full professors have here a clear responsibility in developing the research environments of the UoA. It is stated in the report that three of the full professors have also important administrative duties. External funding is crucial to the development of a good research environment.

The UoA produces a large number of publications. As stated in the report, 388 publications must be considered as very good and the UoA should be congratulated for this achievement. However, as pointed before, it is important to diversify the publications. For instance, 32 % of the publications are written in the area of tax law. Even more important than the issue of diversification is the issue of quality of the publications. Indeed the great majority of the publications are published in Level 1 publications of the Norwegian list whereas only around 15% are published in Level 2 publications of the Norwegian list. In the future, the focus for developing the research environment should be in the increase of the quality of the publications and aiming for publishing in the Level 2 of the Norwegian list. It is important to aim for the best outlets for publications and attempt to build in that manner the reputation at national and international levels of the legal science department at Örebro. One change at the Faculty level that could modify the incentive structure for attempting to publish in Level 2 journals is to terminate providing "premiums" for publishing in Level 1 journals and focus any internal financial rewards on publishing in Level 2 outlets.

2. QUALITY OF THE RESEARCH

2.1 Credibility

Does the research environment produce creative and methodologically sound research of high quality? Please identify strengths and weaknesses.

The UoA produces creative and methodically sound research of high quality. It resorts from the report that the UoA has a great deal of material with prestigious publishing house. The five full professors are active and produce research of high quality. However, as discussed above in section 1(3), the great majority of publications are realised in Level 1 of the Norwegian list. It is certainly true as stated in the report that the researchers in Legal Science always receive a large premium due to the high-impact publications. However, the quality of the research can only be improved by having a publishing strategy focusing on Level 2 publications. As suggested above, the premium for publishing in Level 1 outlets could be abolished to stimulate Level 2 publications. Concerning external research funding, it is stated in the report that the amount of external research funding is not very

impressive. As discussed in section 1.3, time must be allocated (and be given priority before administrative and teaching duties) by the UoA and the Faculty to draft competitive research applications not only for the Professors but also for the senior researchers. The facts that the funding at the UoA comes from top research funders, for instance VR, FORMAS or FORTE, shows that there is high quality in the unit to apply for external funding in high competitive set-ups.

2.2 Contribution

Does the research make a contribution to the literature, the field and/or society? Please identify strengths and weaknesses.

There is absolutely no doubt that the research makes a good contribution to the literature, the field of law and society. There is a large number of publications in prestigious international publications which shows the potential of the UoA at international level. For instance, the UoA has reported 21 editorial contributions. It is a pity that the statistics on publication does not include information as to the structure of publications between publications in Swedish and English language. This would have been relevant information to give clearer guidelines for the future. In any case and in line with the points made in 1.3 and 2.1, publication in Level 2 outlets must be increased. It is not sure (as suggested in the written report) that co-publications with good students will increase the quality of the publications. It is better to seek collaboration with experienced academic colleagues with high academic reputation and solid research networks.

2.3 Communicative

Is the research appropriately communicated to the scientific, professional and lay communities? Please identify strengths and weaknesses.

The research produced by the UoA is accessible and understandable. It is clear that the UoA is active in transferring knowledge and interacting with the surrounding society with notably an active network of lawyers in Örebro. There is a good presence in the media, a good production of textbooks for student's literature and a good amount of expert opinions. The UoA seems to be well-equipped to transfer knowledge to society. In the future, it can be worth exploring the development of a solid Alumni network to establish stronger links with the society and the professional world.

2.4 Conforming

Are there sufficient routines for ensuring conformity with standards for ethics, sustainability and other regulations?

The UoA seems to be well aware of the issue of research ethics, equal opportunities and encourages employees to align with them. The UoA conducts systematic works on ethics and sustainability, and the academic staff are experts on regulations. Moreover, the consulting group gives advices at the level of the individual.

3. THE UNIT'S DEVELOPMENT PLAN

Please provide feedback as a critical friend. The focus should be on how the unit may best develop its research and enhance quality over the next 5-year period.

3.1 Observations and analysis

Please provide observations, reflections and analyses regarding the unit's development plan. You should include relevance of the plan (Is the plan realistic with a focus on an important and clear path forward? Are there sufficient resources and organisation for meeting the unit's goals?) and highlight strong areas that can be enhanced as well as areas in need of development.

The UoA has grown very much in terms of research in the last fifteen years. It is true to say that the legal science Unit is not anymore a teaching factory and that it produces valuable research in Sweden and at international level. The development plan aims at developing research even more in the future based on an increase of internal and external research funding, a better structuration of the sub-units, an increase in the number PhD students, an increase of the number of professor and an increase in the number of publications. As to the choices of these key goals to increase research, it can be said that the stated goals are all essential goals to achieve a growth of the research environment. However, as discussed previously in this report, the quality of the research publications should be prioritised over the quantity of research publications. The diversity of the publications between the research areas is here also important.

The UoA goals are ambitious (and they should be). Yet it resorts from the report that the UoA faces insufficient resources and organisation to achieve them. The paucity of external research funding hinders the research development of the UoA. As pointed out many times in the report, the application to external funding is limited by the high teaching and administrative burdens of the researchers (both senior researchers and professors). Also, the system of promotion (and its non-existence in practise due to the Faculty policy) from associate professor to full professor constitutes a difficult obstacle to pass in order to develop the research environment of the UoA. It seems that the Faculty limits the right to promotion due to budgetary reasons. The growth of the UoA research environment is intricately linked to a necessary increase of research budget at Faculty level.

In terms of structuration, it seems that the existing five sub-units could be extended to seven or eight sub-units with the creation of two or three new sub-units ideally led by a professor. Also, as noted before, the sub-unit in international law is not led by a professor (in contrast to the four others sub-units). It resorts from the interviews that the UoA has young and talented research staffs that could be promoted soon to full-professorship and be the emblems of a new strategy focusing on applying to external research. Concerning the increase of doctoral students, it is stated in the report that the number should be doubled. This last goal is essential to be achieved for the development of the research environment and should be accordingly prioritised by the UoA. It is crucial to have also a bottom-up approach in terms of development and not only to rely on a top-down approach by appointing full professors (an approach which moreover seems quite difficult to realise due to the clear reluctance of the Faculty to promote full professors).

3.2 Recommendations

Please provide suggestions for what the unit should focus on and how improvements might best be realised.

- New sub-units (two or three) could be created ideally led by a full professor (eg in the field of comparative law, European Union law...)
- The sub-unit in public international law should be led by a full professor.
- The UoA and the Faculty must provide time to the researchers for applying to research funding and thus allow them to be competitive in the process of applications at national or international level. Some type of incentive could be provided by the UoA or the Faculty to give to motivated researchers this necessary time to write the application. This time must be prioritised over teaching and administrative burdens.
- The full professors have a special responsibility to apply to external funding. Many of them have heavy administrative burdens which hinders their capacity to apply to external funding. Priority should be given to research and the administrative burden must be reduced.
- The number of PhD students must be substantially increase through applying to external research funding (and this even if it is difficult to apply) and by making sure that the lecturers with permanent positions that do not have a doctoral degree should be supported to start their research education. The number of PhD should ideally be doubled.
- Quality over quantity should be prioritised in terms of publication. The Faculty can revise its premium policy by only giving the premium to Level 2 publications. To ensure diversity of the publications, the research areas producing the less may also be incentivised through a special system of premium in relation to Level 1 publication.
- The system of promotion must be discussed again between the UoA, the other UoAs and the Faculty.
- If there is no revision of the system of promotion, then 2 or 3 positions of full-professors. should be publicly advertised to allow the development of the research environment.

4. CONCLUDING REMARKS

Please summarise your review and provide a closing statement.

The UoA has grown very much in a positive sense in the last years concerning its research environment capacity. Yet it is facing nowadays important and crucial challenges for its future development. These challenges are related mostly and in a nutshell to the key issues of recruitments and external funding. The UoA is clearly at a cross-road in terms of recruitment and external funding, which constitute in fact interrelated challenges. External funding not only brings a higher capacity of recruitment (such as doctoral student) but also increases the quality of the research environment. The recruitment (and also their promotion) of junior and senior researchers is necessary to nurture a qualitative and sustainable research environment that is in turn the essential vector for successful research applications.

ORU2020 Review Report - Media and Communication Studies

Unit of Assessment: Media and Communication Studies

Review Team 1: Magda Pieczka (main reviewer), Harriet Silius, Ulla Runesson Kempe and Roger Säljö

1. QUALITY OF THE RESEARCH ENVIRONMENT

1.1 Is the environment well organised to promote quality research?

The research environment for Media and Communication Studies (MCS) is organised in a clear and effective way into three distinct research groups: Discourse, Communication & Media (DCM), Film & Visual Communication (FVC), and Strategic Communication (SCOM). The groups work productively and, to a degree, in a collaborative manner. It is clear that there has been effective formal leadership provided both at the subject and at the research group levels, although we will return to this point in Recommendations. Finally, as shown in the quantitative analysis ("Resources" document) and in the self-assessment document, MCS is able to obtain external funding from a range of research funding bodies and agencies in order to support a range of different types of research projects.

1.2 Are the main research areas appropriate for the unit and its development?

The Unit's areas of research are relevant and well chosen. The focus on the three named research themes (see point 1.1 above) demonstrates the Unit's broad view of the discipline and places its research in strategic ways within the field. The range of both its funded research and research funders, such as The Swedish Research Council (VR); The Bank of Sweden Tercentenary Foundation (RJ); The Swedish Contingencies Agency (MSB), Forte and Formas shows a clear recognition of the importance of a good fit between the scholarly and other agendas in terms of research development.

1.3 Please comment on the unit's reflective analysis of their environment.

Do the structures and processes create good conditions for high-quality research with regards to personnel, leadership, academic culture, national and international collaborations?

The Unit's strategic direction is to orient itself to international networks and to shape its research in ways that speak to international scholarly communities in the discipline of media and communication studies. This is demonstrated in the self-assessment in terms of membership in relevant organisations, networks, as well as participation in collaborative research (e.g. Pandemic Rhetoric project).

The Unit recognises that they are at a point of transition, replacing two of the four professors at this point in time. As the two positions are Chair professors, these appointments will be crucial to shaping and supporting future research development of the Unit. The Unit has expressed a strong expectation for productive and engaged academic leadership to be provided by the professors yet to

be appointed. This seems to be of particular urgency for one of the research groups (FVC), who recognise the need not only for strengthening the group's staff and expertise, but crucially, for developing a clear identity, locally as well as nationally, and a focused research direction for the future.

Finally, we also note that in its self-evaluation the Unit reflects explicitly on the question of internal collaborations and inclusivity as an area that requires some further attention.

Please provide specific comments on the unit's research funding, publications and productivity.

In terms of funding, we have commented in more detail under point 1.2 on the Unit's strength in attracting funding from a good range of funders considering the nature of the research conducted by the Unit. In quantitative terms, the Unit currently sits at the average level of research funding within the Faculty. There is, however, an expressed ambition, backed by specific objectives in the plan, to improve on the current position. Given its recent experience, trajectory of development, and the potential expertise and energy that should be enhanced by the two new senior members of staff expected to join the Unit shortly, there is clear potential for this ambition to be realised.

The Unit has demonstrated a good level of productivity over the years under review, prioritising peer reviewed articles and achieving presence in a number of high quality journals in the field. The Unit's visibility in a number of Handbooks in the field, to mention only The Routledge Handbook of Critical Discourse Studies, and Routledge Handbook of Strategic Communication, can also be taken as a sign of scholarly success and a sound strategy for establishing a strong international reputation.

2. QUALITY OF THE RESEARCH

2.1 Credibility

Does the research environment produce creative and methodologically sound research of high quality? Please identify strengths and weaknesses.

The vast majority of research under consideration is of very good international standard. While citations analysis shows that 58% of published research was cited more than average for the corresponding subject category, year and document type, qualitative analysis of a submitted sample of publications demonstrates the Unit's expertise in a range of methods and approaches, with a particular strength in the critical approach and discourse analysis. If there are any weaknesses to point out, it is the fact that around 12% of publications have not been cited at all. While this may not necessarily be an indicator of a weakness (for example, for a novice researcher, getting published in itself may count as a positive outcome), yet 20+ uncited publications represent months of staff time that has perhaps not been used as productively as it could have been. We see this as connected to the question of internal collaborative working, which we come back to in Recommendations.

2.2 Contribution

Does the research make a contribution to the literature, the field and/or society? Please identify strengths and weaknesses.

The Unit's research is clearly visible to the relevant scholarly community, as argued in the self-assessment and supported by the publications and citations record. However, making a contribution

to society, rather than to the discipline, needs to be taken together with the question of research dissemination practices, considered below in section 2.3 Communicative Quality.

2.3 Communicative

Is the research appropriately communicated to the scientific, professional and lay communities? Please identify strengths and weaknesses.

The Unit as a whole has examples and history of very good engagement with non-academic communities, whether professional or local. On closer examination, however, there seems to be some imbalance in this respect between the three research groups. Sections 2.2 and 2.3 of the self-assessment document offer some good examples of the Unit's knowledge dissemination practices in relation to a range of non-academic publics. Strategic Communication team (SCOM) appear to have a particular strength in this area, as demonstrated, for example, by their engagement with the Swedish Contingency Agency, aiming to impact professional practices in crisis management through the means of training manuals. Similarly, members of the Film and Visual Communication (FVC) group engaged with local communities (Linköping; Gävleborg region), and with relevant cultural institutions (e.g. Moderna Museet, Stockholm). It is a little harder to form a clear picture of the knowledge dissemination practices of the Discourse, Communication & Media group in relation to non-academic communities. We come back to this point in Recommendations.

2.4 Conforming

Are there sufficient routines for ensuring conformity with standards for ethics, sustainability and other regulations?

Our view is that there is no reason for concern in this area. At the same time, we note the Unit's own recognition of the need to work on improving gender equality. We would have also welcomed a more explicit articulation of the role that research ethics in the wide sense plays in the research of this Unit.

3. THE UNIT'S DEVELOPMENT PLAN

Please provide feedback as a critical friend. The focus should be on how the unit may best develop its research and enhance quality over the next 5-year period.

3.1 Observations and analysis

Please provide observations, reflections and analyses regarding the unit's development plan. You should include relevance of the plan (Is the plan realistic with a focus on an important and clear path forward? Are there sufficient resources and organisation for meeting the unit's goals?) and highlight strong areas that can be enhanced as well as areas in need of development.

The plans for the future are detailed, clearly related to the strategic goals, and preoccupied with the tactics. It would be beneficial to have an equally developed discussion at the strategic level, particularly in terms of visioning of a future that identifies developments that go beyond maintaining the status quo.

3.2 Recommendations

Please provide suggestions for what the unit should focus on and how improvements might best be realised.

1. In the discussion so far, the issues of internal collaboration and inequality have been noted. The recommendation here is to increase co-authoring of publications, particularly between the most senior and most junior researchers, as well as between men and women in the Unit whenever possible. This strategy should be publicly communicated by the leadership as a goal to be achieved in the near future.
2. In the discussion with the representatives from MCS, colleagues expressed the intention of exploring the possibility of a shared research project to develop synergies between the three research groups. This is a very positive initiative and we recommend that it should be written into the plan in order to strengthen the Unit's internal coherence.
3. The FVC group appears rather vulnerable at this juncture. It is our recommendation that the requisite attention and support are offered, particularly in the short term, to lead the group towards clarifying its future direction and finding a good research footing (themes, projects, publishing plans).
4. Attention should be given to equal opportunities for participation in research, teaching, and administration.
5. More explicit strategy for research dissemination and engagement with appropriate non-academic stakeholders should be articulated for each of the three research groups.
6. Our recommendation for the publishing strategy is for the Unit to increase its use of the book format as a way of communicating its research expertise internationally. In addition to contributing to handbooks, the group should consider identifying a small number of strategic opportunities and lead on such projects. For example, bringing together food, discourse and the nation, thus building on the existing research interests, might be one such project.
7. We invite the SCOM group to reflect on its stated aim of expanding research "to new areas of strategic communication and organisational communication". The current focus on crisis and risk is very clear and has served the Unit very well. It is well positioned in terms of societal needs, well aligned both theoretically and in terms of opportunities for funded research. Rather than lose this focus, it might be worth increasing and deepening the research conducted in this area to enhance this group's international standing.
8. We encourage the DCM group to consider articulating a stronger conceptual focus to their work in addition to the discursive approach itself. There appears to be a clear underlying interest in *change* in Swedish culture and society. This could perhaps offer an additional platform for managing research development in ways that introduce a better and explicit balance between individual researchers' preferences (presented as "organic" development) and a shared direction for this group, or even for the Unit's shared research project, see point 2 above.

4. CONCLUDING REMARKS

Please summarise your review and provide a closing statement.

1. The overall impression we formed of the MCS research Unit is that it is strong, dedicated, ambitious, as well as brave and honest in its ability to self-reflect. The Unit enjoys a level of international recognition that could be built upon further.
2. The review team found it hard to understand the reasons for the barrier to promotion to Professorship, as opposed to appointments through competition. We were unsure about the benefits of this policy, particularly in terms of staff motivation and the University's ability to retain its strongest researchers.
3. In the discussion with MCS group and the other Units evaluated by review team 1, it became clear to us that that ORU2020 provided opportunities for useful reflection and learning for colleagues. In view of this, as well as the comment we made in section 3.1 above about innovation, we believe that there should be a more regular mechanism for this and other Units of Assessment to look in creative and innovative ways at their own direction and their respective fields.
4. There is a need for the University to ensure that research ethics in terms of: its institutionalisation in the Swedish system of higher education, researchers' responsibilities, and their education are well understood by all researchers at Örebro.

ORU2020 Review Report - Musicology

Unit of Assessment: Musicology

Review Team 2: Alexandra Kertz-Welzel (main reviewer), Otto Fischer, Christian Fuentes

1. QUALITY OF THE RESEARCH ENVIRONMENT

1.1 Is the environment well organised to promote quality research?

“Musicology” as an interdisciplinary unit constitutes the research environment “Music and Human Beings.” It is well organised as a unit in the School of Music. There are no subunits or links to external organisations. During the period of assessment, there have been 8 researchers (2 professors, 4 senior lecturers, 1 associate senior lecturer, 1 postdoc), 8 doctoral students, official guest professors and informal guest professors. The unit is led by the head of subject and governed by the head of the School of Music.

The critical point, however, is the extensive teaching load, for instance senior lecturers spending 80% of their time teaching. Likewise, the administrative burden for those in charge is problematic. To ensure quality research in the years to come, the amount of teaching and administrative duty should be reconsidered. While external funding could be a solution, as mentioned in the self-assessment, there might also be other options, for instance reducing the teaching responsibility for a certain amount of time while increasing it at other times to be more flexible, or creating online and blended courses.

1.2 Are the main research areas appropriate for the unit and its development?

The Unit of Assessment (UoA) investigates music as a cultural and social phenomenon and has both a perspective from the humanities and the social sciences. The focus is on an inclusive understanding of music and people’s relation to it. It is about listeners but likewise about “practitioners,” about amateurs and professionals, people of all ages, no matter if music in everyday life, on the streets or in concert halls.

The UoA’s main areas of research are “Musical Experience and Practice,” “Music and Equity (Gender, Class, Nationality, Ethnicity),” “Music and Media,” “Music Education and Training” and “Music Creation.” These different areas are summarised under the umbrella of Musicking as a well-known concept in musicology and music education. Central questions are related to the impact culture and society have on the relation between people and music.

There are two different themes under which research is conducted in this UoA: One is ACCALIM (Aesthetics, Culture and Media), investigating the impact of society and culture on musical practice and related areas, while MOVE (Musical Expression and Experience) is concerned with individuals’ musical experiences and creativity. There are also three externally funded projects related to these areas of research.

The research areas are appropriate for the unit and its further development. They link music education, performance and musicology. But likewise, the topics are rather broad and represent what is generally important in international research. It might be a task for the future to work on creating a more explicit profile of this research environment, to further shape its specific contribution to research, given its unique structure.

1.3 Please comment on the unit's reflective analysis of their environment.

Do the structures and processes create good conditions for high-quality research with regards to personnel, leadership, academic culture, national and international collaborations?

The UoA does provide the conditions necessary for high quality research. Regarding staff and recruitment, there is a healthy combination of permanent and fixed-term positions to guarantee continuity as well as fresh energy. Gender equality and equal opportunities are ensured by a quota. The gender distribution between professors is equal, even though there might be a male dominance regarding senior lecturers. The docents show a variety of research interests in lecturing and teaching, although the fact that highly specialised researchers teach can lead to the problem that they are not easy to back up or being replaced, as the self-assessment emphasises. Furthermore, leadership, teaching and research are time and energy consuming activities which are not easy to balance in the timeframe given, as the self-assessment points out. However, even though the UoA has international researchers, there might still be room for more international collaboration, for instance on an institutional level, not only depending on the engagement of individual researchers.

The leadership structure is supportive, with a minimal distance between academic and formal leadership. The UoA has the advantage of a small environment in terms of close contact between its members, but also the problem of a lot of administrative duties which need to be shared between a few people. The academic culture is vibrant and alive, supported by respectful communication and each researcher's freedom to define the own area of research, sometimes in relation to the university's larger research projects such as "Successful Ageing."

The UoA's self-assessment is appropriate and shows its ability to realise its strengths and weaknesses, to work on them and to ask for support from the university.

Please provide specific comments on the unit's research funding, publications and productivity.

The UoA received a sufficient amount of external funding and there also is a balance between internal and external funds, even though the amount certainly varies in respective years – and the internal funding might remain on a low level (since 2019).

The external funding of doctoral students is not mentioned in the statistics, as the self-assessment emphasises. Government funding, however, is at a rather low level and might not increase in the years to come which is a problem. There have been large externally funded projects such as "Discourses of Academization and the Music Profession in Higher Education" (The Bank of Sweden Tercentenary Foundation, 2016-2020), "Everyday Devices. Mediatization, Disciplining and Localisation of Music in Sweden 1900-1970" (Swedish Research Council, 2016-2018) and "Music, Identity and Multiculturalism: A Study of the Role of Music in Ethnic-Based Associations" (The Bank of Sweden Tercentenary Foundation, 2013-2016).

Regarding publications, the unit is productive in a variety of ways, even though in musicology and music education, numbers of citations or scores do indeed not always capture the impact of

research and publications, as stated in the self-assessment. From 2013 until 2019, members of the unit published 46 articles in journals, 5 books, 40 chapters in books and 118 conference papers. The publications cover a wide range of topics, in relation to the overall theme “Music and Human Beings.” The members of the unit edited 4 books. The Norwegian publication scores have been rising since a low in 2014. There are generally less journal articles, but more book chapters and more-single-authored ones.

Certainly, there is always room for improvement. There could be more international collaborations, not only depending on individual researcher’s engagement, and thus larger grants, for instance on the European level. The fact that the university’s grant office recently recruited someone specialised in the humanities and social sciences could help in this endeavour, for instance through pointing out important calls, offering workshops on grant application writing and guiding through the whole process.

2. QUALITY OF THE RESEARCH

2.1 Credibility

Does the research environment produce creative and methodologically sound research of high quality? Please identify strengths and weaknesses.

While this criterium, as well as the related others, aims rather at the natural sciences, musicology being part of the social sciences and the humanities, it is still a point of reference. 7 articles received full scores according to NSD (out of 22 publications). There have been external grants, invitations and commissions which show the credibility of the research and how highly regarded it is.

Due to consisting of three different fields (music education, performance, musicology), there is a variety of research methods. Particularly in performance, there have been new methodological tendencies such as artistic research. The UoA is critically examining this new field which might open up new opportunities for research and funding.

2.2 Contribution

Does the research make a contribution to the literature, the field and/or society? Please identify strengths and weaknesses.

The publication output of the UoA is impressive and certainly well received and important, also including reviews, invitations to be a dissertation opponent, external reviewer or members of editorial boards. One professor of the UoA being chair of an international organisation proofs how highly regarded musicology at Örebro University is. However, more international collaborations, not only on the individual, but also on the institutional level, might increase the global visibility of the research, for instance likewise through more contributions to the currently produced handbooks in music and music education as published by Oxford University Press and Routledge.

2.3 Communicative

Is the research appropriately communicated to the scientific, professional and lay communities? Please identify strengths and weaknesses.

Knowledge transfer concerns not only publications, but likewise the organisation of four international conferences, students in educational contexts or the communication with the public.

The researchers of the UoA communicated the results of their work appropriately to the professional community and to the public. There are different formats, for instance podcasts, videos, public lectures or concerts. It might indeed be helpful to consider a broader variety of formats and to have for instance more lectures or concerts open for various target groups, e.g. lectures for children or other specific audiences. The UoA mentioned in its self-assessment the “longstanding request that the Communication and Collaboration department at ORU allocates one person of its staff to each of the university’s research environment.” This might indeed be a promising way to go in supporting the UoA’s work.

2.4 Conforming

Are there sufficient routines for ensuring conformity with standards for ethics, sustainability and other regulations?

The UoA certainly ensures that ethical standards are implemented, also training doctoral students in observing respective regulations, for instance regarding sustainability. In the UoA’s self-assessment, ethics, morals and sustainability are extensively described as being crucial for the research in the respective areas.

3. THE UNIT’S DEVELOPMENT PLAN

Please provide feedback as a critical friend. The focus should be on how the unit may best develop its research and enhance quality over the next 5-year period.

3.1 Observations and analysis

Please provide observations, reflections and analyses regarding the unit’s development plan. You should include relevance of the plan (Is the plan realistic with a focus on an important and clear path forward? Are there sufficient resources and organisation for meeting the unit’s goals?) and highlight strong areas that can be enhanced as well as areas in need of development.

The development plan refers to the strengths of the UoA, to further nurture them, but likewise to weaker areas to improve them. The plan to develop and implement a strategy for the recruitment of senior lecturers to further strengthen the unit and also the suggestion for a thematic connectivity is convincing. For the future it is important to find a better balance between research, teaching and administration. Likewise, support from the university, for instance regarding communication or grant applications, is important.

The proposed topic “Music and Democracy” has a huge potential to attract excellent researchers, funding and to produce relevant research for music education and musicology internationally. While the elaboration in the self-assessment is convincing, the meeting with the UoA showed that it is still an idea to be further developed and to be discussed in more detail with the members of the UoA.

3.2 Recommendations

Please provide suggestions for what the unit should focus on and how improvements might best be realised.

Above all, the university should ensure a better balance between research, teaching and administration. High quality research is only possible if there is time for it. Internal or external funding could also be a solution, likewise handling teaching more flexible (see 1.1) More support from the university would be necessary for communication and grant writing.

While the UoA's research areas are appropriate, they could also be shaped in a more specific way, utilising the strengths this unique research environment has (see 1.2).

The UoA could certainly further work on its international profile, being in more collaborations which do not only depend on individual researchers. Likewise, more contributions to international publications such as international handbooks would be beneficial to further strengthen the research profile and international visibility (see 1.3). Securing more funding, particularly for young scholars or larger European or international projects, might likewise be something to pursue.

It might also be useful to have an open discussion about the strength and weaknesses of artistic research, in general and with regard to musicology at Örebro University. It is an important asset to further connect performance and research and could open up interesting perspectives for the UoA (see 2.1).

While the communication with the professional community and the public is good, there could certainly be a wider variety of formats addressing various kinds of groups (see 2.3). Thus, the university might consider the UoA's request that the Communication and Collaboration department allocates one person of its staff to each of the university's research environments. While the future plan for the recruitment of senior lecturers sounds convincing, the development of a thematic connectivity regarding "Music and Democracy" will need further discussion and elaboration (see 3.1).

4. CONCLUDING REMARKS

Please summarise your review and provide a closing statement.

Musicology is a strong research environment at a university which offers many opportunities. The UoA shows an impressive record of research and publications and potential for playing an even more important role in the global research community in the future. But musicology needs further support from the university to fulfil its mission in a changing world, following the promising vision the UoA has developed.

Finally, we would like to encourage the UoA to continue its excellent work. The self-assessment shows the high potential and the level of critical reflectiveness which the unit has. Musicology is a strong research environment with great potential to become a leading voice in the international research community.

ORU2020 Review Report – Political Science including Social Studies Education

Unit of Assessment: Political Science including Social Studies Education

Review Team 3: B. Guy Peters (main reviewer), Marie Torstensson Levander, Kajsa Ellegård and Xavier Grousot

1. QUALITY OF THE RESEARCH ENVIRONMENT

1.1 Is the environment well organised to promote quality research?

There are several aspects of the structure of this Unit that are important in shaping its research activities. The first is the existence of two distinct sets of faculty members within the Unit—Political Science and Social Sciences Education. We understand that this current situation reflects the history of the University, but it appears that these two components within the same Unit have different missions, and commitments to differing levels of research and teaching. The Unit appears to manage the situation well, but it does not appear to be the most appropriate way in which to structure this Unit.

Another structural issue which appears common to all units at Örebro University, but which is especially relevant for Political Science, is the inadequate support for units when one of their members assumes an administrative post within the University. The Unit characterized this problem as “understaffing” in their report. It appears that when someone assumes an administrative position the Unit must then find ways to cover the teaching vacated by that faculty member from their own resources, or with limited support from the University. This practice imposes an additional burden on the members of the unit, and some means of providing replacements or “overstaffing” members of the unit should be created. As noted, this has been a particular problem because this Unit has had several members working in administrative positions. Having members of the Unit in those positions may have improved their influence over the direction of the University but has harmed their quotidian teaching program.

The same problem of losing necessary teaching arises for research funding that buys out some proportion of a faculty member’s teaching time. The research record of the unit and the individuals may be improved by these buyouts, but a burden is imposed on other members of the Unit. This potential burden on their colleagues creates something of a collective disincentive for members of this, or any other unit, to seek external funding, as well as to take administrative positions within the University. Both of teaching and research impose demands on the time of the personnel of the Unit and are important for its role within the University, but the actual demands were difficult to assess without more information on the teaching needs of the Unit.

The written self-assessment described the research environment of the Unit as “fragmented” (p. 9). This statement is probably true, but it is probably also true of most political science departments in the world. The field contains a number of sub-fields with their own research questions, theories,



journals and cultures. The differences in approach between a scholar of individual behaviour using experimental methods and a normative political theorist are substantial, and naturally reduce integration within the Unit. The disciplinary basis of fragmentation within the research environment is almost certainly something with which the Unit must continue to cope.

Although to some degree the research environment is naturally fragmented, there is another question about the fragmentation, which arises from the report. There are two major emphases in the research profile of the Unit—citizen participation and public policy. There are members of the Unit who are active researchers in a variety of other areas of the discipline of Political Science. The question then is whether those individuals not in the two major areas of research are, in essence, not fully involved in the research environment of the Unit. It appears that some attention should be given to ensuring that scholars involved in all aspects of research are included adequately in the collective research environment.

It was not entirely clear from the report whether there were lecturers in the unit that were not involved in the research program of the Unit. It is very clear that the PhD students are very much involved, and play an important role in the research activities of the Unit, but any lecturers do not figure either in the self-assessment of the Unit or their Website.

One question raised in the self-assessment, and more strongly in the meeting with Political Science, was the strategic choice involved in promoting more, and more consequential, research. One strategy is to rely on individual researchers to develop ideas and then to build a team (within and without Örebro University) to conduct the research. The alternative strategy is to have research groups within the Unit and use those teams to generate ideas. Perhaps reflecting the more individualistic American university culture, we would recommend the former strategy, especially if the intention is to pursue “big ideas” and not just to do more incremental research. This strategy does not mean that members of the Unit should not be involved in developing the research. On the contrary, even members of the faculty not directly involved with the research should be encouraged to participate in seminars and to provide comments. But it does mean that there should be more emphasis on individual researchers rather than relying on teams.

1.2 Are the main research areas appropriate for the unit and its development?

Yes. They are doing research in a number of areas conventionally found in political science departments.

1.3 Please comment on the unit’s reflective analysis of their environment.

Do the structures and processes create good conditions for high-quality research with regards to personnel, leadership, academic culture, national and international collaborations?

See above.

Please provide specific comments on the unit’s research funding, publications and productivity.

2. QUALITY OF THE RESEARCH

2.1 Credibility

Does the research environment produce creative and methodologically sound research of high quality? Please identify strengths and weaknesses.

The bibliometric information provided by the Unit demonstrates a good deal of research activity and publication. The aggregate figures provided do not provide adequate information on the dispersion of publication among the members of the Unit but, by tracking down additional information from the Unit website, it appears that, despite different levels of productivity, all the members of the Unit are research active and making contributions to the research program of Political Science.

2.2 Contribution

Does the research make a contribution to the literature, the field and/or society? Please identify strengths and weaknesses.

One change at the faculty level that could alter the incentive structure for attempting to publish in level 2 journals is to terminate providing “premiums” for publishing in level 1 journals, and focus any internal financial rewards on publishing entirely on level 2 outlets. While the researchers with whom we spoke did not appear to very interested in, or motivated by, those premiums, they are still being paid and if they only went to higher quality outlets they might attract more attention.

Improving the quality of publications, in this case meaning the quality of their placement, can be a collective as well as individual effort. There is an active internal seminar series in Political Science and that seminar could focus even more intensively on providing advice on manuscripts before they are submitted, and for assisting in revisions if a manuscript is not accepted. This point does not contradict the point above about individuals initiating research, but rather accepts the importance of collaboration in refining research.

2.3 Communicative

Is the research appropriately communicated to the scientific, professional and lay communities? Please identify strengths and weaknesses.

In their self-assessment Political Science said that one of their goals was “more publication”. More publication is a reasonable goal, but is perhaps not the most important goal for the research program of this Unit. Individual and collectively the Unit has demonstrated that they can indeed publish, but much of that publication has been in outlets that are classified as “1” on the Norwegian list of journals. There are some publications in level 2 journals, but the bulk of publications are with the less respected journals and presses. Our sense is that if Political Science is to move to the next level in terms of visibility and respect, the emphasis must be on publishing in the top-level journals.

To elaborate the above point further, there is also a difference between publishing in a high quality specialist journal and publishing in a high quality general journal e.g. the *European Journal of Political Research*, or the *British Journal of Political Science*. These journals are certainly more difficult targets for papers, but they do confer the greatest prestige on the author and the institution. Political Science at Örebro University faces a particular problem in this regard because of

the strong emphasis on public policy and public administration. The general journals tend to be dominated by studies of individual political behavior, e.g. voting or public opinion, and to devote less space to policy and administration. Despite that disadvantage, it is important to aim for the best outlets for publications, and attempt to build the reputation of the Political Science program at Örebro University in that manner.

2.4 Conforming

Are there sufficient routines for ensuring conformity with standards for ethics, sustainability and other regulations?

Yes.

3. THE UNIT'S DEVELOPMENT PLAN

Please provide feedback as a critical friend. The focus should be on how the unit may best develop its research and enhance quality over the next 5-year period.

3.1 Observations and analysis

Please provide observations, reflections and analyses regarding the unit's development plan. You should include relevance of the plan (Is the plan realistic with a focus on an important and clear path forward? Are there sufficient resources and organisation for meeting the unit's goals?) and highlight strong areas that can be enhanced as well as areas in need of development.

The final point to be made concerning Political Science is to assess the vision they had for their future development. As implied by some of the points we have already made in this report, the vision for the future of the Unit appears rather modest. The goals expressed are to a great extent to continue to do what they have been doing in the recent past, and to maintain their current level of performance in publication and in funding. While maintaining one's position in a competitive academic environment—in Sweden and worldwide—is certainly not a bad thing, considering ways of enhancing the position of the Unit in that environment would represent a more impressive vision, and a better goal. There appear to be a number of talented scholars within the Unit, and they should perhaps aspire to a higher level of performance.

3.2 Recommendations

Please provide suggestions for what the unit should focus on and how improvements might best be realised.

A number of recommendations have already been made in the text above. The fundamental point is that Political Science should focus on quality for publications and for grant proposals. There are talented people in the Unit and they should work to maximize their potential contributions to the discipline and the University.

Some of the same points that are made above concerning publication can be echoed here concerning grants and the search for funding. The Unit has had some success in acquiring financial support for its research, but there are actions that might make it more effective in gaining money for research. One would be a more explicit focus on learning from rejections of proposals, using the



departmental seminars as a means of taking the input from failed grant proposals to revise those proposals and perhaps generate new ones.

There appear to be two things that the University could do to facilitate Political Science in the pursuit of additional funding. One would be to facilitate cooperation within the University that would enable Political Science to be more successful in receiving funds from the Knowledge Foundation. Given that this fund requires cooperation with private sector organizations, facilitating collaboration with units such as business and engineering would provide opportunities to receive funding from that source. Also, having some “seed money” available to the Unit to initiate new research initiatives would also enable them to increase their funding opportunities.

There are also recommendation directed to the University in the general comments from our team. These are intended to assist in maximizing the effectiveness of the Unit.

4. CONCLUDING REMARKS

As said several times, there are some talented people in the unit but their effectiveness appears constrained by a number of problems at the University level. Further, their report shows relatively little vision for improving the unit, other than doing more. They need to be encouraged to have higher aspirations, although the resource constraints from the University may prevent that from ever happening. The members of the unit—individually and collectively—should be encouraged to invest in enhancing quality more than quantity as they develop their research in the future.

ORU2020 Review Report - Psychology

Unit of Assessment: Psychology, subunits CHAMP and LEADER

Review Team 7: Christopher Eccleston and Philip Hwang (main reviewers), Hedvig Ekerwald and Birgitta Langhammer

1. QUALITY OF THE RESEARCH ENVIRONMENT

1.1 Is the environment well organised to promote quality research?

Both research environments, CHAMP and LEADER, are very well organised from a national as well as international viewpoint. Based on the self-assessment and interviews there seems to be a recognition that research plays an important role in the everyday life of both research environments. Both environments undertake and promote good/excellent quality research that is widely spread and cited within the international scientific community. In addition, they attempt to involve and engage employees in the unit in research projects, grant applications, etc. One often cited obstacle concerns time set aside for research versus teaching. The two research environments are responsible for a major part of teaching at the psychologist program plus various other courses in psychology.

1.2 Are the main research areas appropriate for the unit and its development?

Overall, the main research areas are appropriate for the unit and its development. CHAMP should maintain its focus but consider growing (e.g., paediatric pain, multimorbidity in later life). LEADER might consider narrowing its research scope into more specific fields and away from mainstream developmental psychology.

1.3 Please comment on the unit's reflective analysis of their environment.

Do the structures and processes create good conditions for high-quality research with regards to personnel, leadership, academic culture, national and international collaborations?

Both research environments do their utmost to maintain and develop their research, but there are barriers to overcome if they are to succeed in the future.

Please provide specific comments on the unit's research funding, publications and productivity.

Both CHAMP and LEADER, based on both research environments' bibliometric information and the interviews, have excellent research productivity and output. There has, however, been a decrease in some areas during the last few years, such as the number of dissertations (no dissertations in 2019 from either CHAMP nor LEADER), external research grants received (between 2015 – 2017, average million per year was 14.5 million SEK but in 2018 – 2019 this figure had decreased to 8.6 million SEK) and to a lesser extent the number of publications produced. Given the environments previous high productivity these decreases may, however, only be temporary. Changes like these can be expected as the heads of both environments have changed but can also be due to having previously received large grants and a large output of dissertations in 2015 – 2018.

2. QUALITY OF THE RESEARCH

2.1 Credibility

Does the research environment produce creative and methodologically sound research of high quality? Please identify strengths and weaknesses.

CHAMP has so far produced exceptional research of high quality that is methodologically sound. The Research produced concerns issues of great practical and societal importance. Similarly, LEADER has produced research of high quality but in comparison to CHAMP, the productivity of this team is less impressive. The research from LEADER is broader in scope compared to CHAMP, ranging from research in developmental psychology, research on sustainability and cognitive neuroscience. There are benefits being broad in scope like the research in LEADER, but there are also disadvantages. Given the limited resources, both internal and external grants, it would probably be wise for LEADER to be narrower in scope, focusing to a larger extent on a few specific areas of developmental research.

When going through both environments' list of publications, it seems that far from all teaching staff are involved in research. There are probably many reasons for this, but this might be an aspect that should be investigated more closely. A final comment, concerns that both environments. CHAMP as well as LEADER seem to be missing papers from higher impact mainstream medical and developmental psychology journals.

2.2 Contribution

Does the research make a contribution to the literature, the field and/or society? Please identify strengths and weaknesses.

Both environments' research are productive in publishing papers in peer-reviewed international journals. However, a greater focus on publication destination (choice of journal) and citation half-life might be helpful.

There is an impression that contributions to the literature, and hence to society, could be stronger if papers could be combined into greater contributions and submitted to better journals. Researchers in both environments are, however, concerned with issues that are of great importance for society, both nationally and internationally and have a strong track record of delivering change.

2.3 Communicative

Is the research appropriately communicated to the scientific, professional and lay communities? Please identify strengths and weaknesses.

As the psychologist program is mainly taught by members of CHAMP and LEADER these two research environments have ample opportunities to communicate research to the scientific professional and lay communities. This is probably mainly done through the students involved in the program. There is the impression from both the evaluation and interview that both research groups are well known nationally, and advice is frequently sought from individuals.

2.4 Conforming

Are there sufficient routines for ensuring conformity with standards for ethics, sustainability and other regulations?

The importance of research ethics has increased in Sweden, partly due to the introduction of a national authority for ethical approval. As psychology and social work belong to the same school and as the sociology unit that leads the course for the doctoral students on the faculty level regarding research ethics, it might be beneficial with closer collaboration with the sociology unit regarding ethics. There is no mention of degree of sustainability in the self-assessment of the psychology unit.

3. THE UNIT'S DEVELOPMENT PLAN

Please provide feedback as a critical friend. The focus should be on how the unit may best develop its research and enhance quality over the next 5-year period.

There are some things that should be pointed out/discussed and these issues are divided into three categories: general aspects, specific aspects and other aspects.

General aspects

One aspect has to do with the "optimal" structure of the unit, and whether defining oneself as one unit with two research environments, which could be decreased to only one research environment or, if this is a better way of operating, grow to three or four environments.

The language of environments and units is well practiced and useful internally, but externally is confusing and does not translate well. Internationally people are used to departments and faculties or schools. Here we have units, no departments but schools, and then faculties. The faculties were relatively invisible to us as reviewers, and the units appear externally like research centres of groupings. For example, a psychology department with research groups such as CHAMP, LEADER, and others to be developed could stimulate growth. Alternatively, a school of social and behavioural sciences could equally stimulate growth.

Another issue concerns different incentives for collaboration both internally and externally. Both retired professors have previously contributed to their respective environments with several honorary doctors and numerous international collaborations. How should initiatives like these continue in the future? Clearly the groups are in a time of transition and this wider network of influencers who can champion and support the excellent work being undertaken needs to be refreshed. Consider having an advisory board of international researchers for both research environments separate or together.

Consider also finding new ways of collaborating within and between research environments CHAMP and LEADER but also between units (sociology, social work and psychology), and across the University. We are sure that there are many existing collaborations so we do not mean to imply this is not done, just that it is not visible or active. All parties could benefit from these different types of collaboration.

There is an urgent need for improved management information. We were surprised that the unit leaders were not able to access information on grant capture (submission rates, behaviours, targets, conversion rates, number of PIs to CIs, etc.). Consequently, it is not possible to accurately assess

grant behaviour in the units. For example, whether the grant capture figures are due to a change in rates of submission or in success. Further, the lack of interest or acceptance gives the impression of a lack of management over core business, in which individuals are solely responsible for their grant activity. The same picture could also be stated for publication behaviour (quality and quality, target destination, impact and citation, etc).

Both research environments produce research that is both methodological sound and of high quality. There is a need for developing a communication plan that includes greater visibility externally, both nationally and internationally. The world deserves to learn more about the excellent work being done.

Specific aspects

With a few exceptions most employees must combine teaching and research. Consequently, time and resources necessary for research are limited. As CHAMP and LEADER are both heavily involved in the psychologist program and several other psychology courses, the unit may consider various measures allowing members of both research environments to spend more time for research (e.g., issues regarding recruitment, competency development, introducing new staff, etc).

A related issue, when going through both environments' list of publications, is that far from all teaching staff are involved in research. This might be an aspect that should be looked into in order to ensure that more personnel will be involved in research and research publication.

In discussions about incentives and progression it became clear that how one progresses in one's career at Örebro is unclear. One might even suspect that Örebro is a 'dead-end' position as it is not possible to progress there. Of course, there are intrinsic rewards for research production but financial restraints and the model of spending research funds on full professors has left a legacy of 'glass ceilings'. Helpful would be to have internal communications so the rules for progression and advancement are transparent and understood.

We recognise that system change at the University-wide level is not the responsibility of the units of assessment. However, the broader issue of incentives and rewards for performance could be reviewed at the local level.

Other aspects

To reach practitioners etc. with information from the research environments, consider setting up an alumni program with previous students from the psychologist program.

3.1 Observations and analysis

Please provide observations, reflections and analyses regarding the unit's development plan. You should include relevance of the plan (Is the plan realistic with a focus on an important and clear path forward? Are there sufficient resources and organisation for meeting the unit's goals?) and highlight strong areas that can be enhanced as well as areas in need of development.

Many of the barriers and frustrations experienced appear structural. Many aspects seem to be rigid, for instance the number of hours and courses that you are supposed to teach; almost no acceptance of when a teacher is newly employed at the unit; all teachers have to do a similar amount of teaching irrespective of whether these teachers are involved in research or not; recruited professors

are not given any extra hours based on the number of PhD-students they supervise; the only way to be relieved of teaching responsibilities is to receive external funding which means that you will only get part of the so called “kompetens utveckling”. It is not possible for a young ambitious Docent to be promoted to Professor which might mean that they will leave the university for a university where it’s possible to be promoted. A common argument is that the non-promotion policy has to do with that a Professor is more expensive in comparison to a teacher. Universities in Sweden have solved this dilemma in various ways, and it might be helpful with some benchmarking here.

The research being done in CHAMP and LEADER is impressive given the above-mentioned constraints. However, it is questionable whether this level of excellent research can continue given all these constraints. Something needs to be done here!

3.2 Recommendations

Please provide suggestions for what the unit should focus on and how improvements might best be realised.

1. Consider a thorough internal review of publication and grant capture metrics to give clearer management information.
2. Consider refreshing the international support and visiting staff networks.
3. Consider a mapping exercise of the interests and skills of research active members of staff against national and international priorities for research funding.
4. Consider revising incentives and reward structures for progression and making them transparent.
5. Consider mentoring systems to develop individuals in their work plans, to increase their sights for contributions.
6. Consider finding a terminology for research environments, units, Schools and Faculties that translates well and are understandable externally.
7. Consider developing a communications plan that promotes greater visibility externally, both nationally and internationally.
8. Consider whether the current structure of the unit into two research environments is an optimal structure for research productivity, collaboration, etc.
9. Consider whether the scope of the research being undertaken in CHAMP and LEADER is the appropriate size or too broad or too narrow.
10. Consider various innovative measures allowing members of both research environments to spend more time for research.

4. CONCLUDING REMARKS

Please summarise your review and provide a closing statement.

Both LEADER and CHAMP are valuable assets for the University. They have a significant track record of success, can demonstrate sustained contributions to important societal issues, and have members who are nationally and internationally recognised.

The research environment is, however, sub-optimal and somewhat confusing to its members. Some features are out of members’ direct control and some can be changed. Externally researchers are hampered by the lack of management information, unclear or broken incentive structures, and a dominance of teaching considerations in wider management decisions (e.g., recruitment). Some



factors are in local control and should be considered, including creating wider networking support to root individuals better outside of Sweden, mentoring to change publication practice to be more ambitious and focussed.

The structures that have brought CHAMP and LEADER to this current success are not necessarily the right structures to maintain this level of contribution. With new leadership in place, it is a good time to consider new structures to deliver growth in the 2021-2026 period.

ORU2020 Review Report - Social Work

Unit of Assessment: Social Work

Review Team 7: Birgitta Langhammer (main reviewer), Christopher Eccleston, Philip Hwang and Hedvig Ekerwald

1. QUALITY OF THE RESEARCH ENVIRONMENT

1.1 Is the environment well organised to promote quality research?

The unit of Social Work is mainly organised and focused on the education of Social Workers and the promotion of research is dependent on individuals and their possibility for time allocation to the same.

All teachers, 18 senior lecturers with PhD, 15 adjunct lecturers without PhD, all have 20% competence development time that can be used for doing research or develop competence in other ways. Unfortunately, this time allocation seems to be used for other purposes, for example teaching, which is unfortunate and inefficient. Furthermore, the personnel consist of 18 senior lecturers, where only a fraction is involved in research. One may also question the time allocated for PhD implementation, where one of the PhDs admitted in 1999 still have not delivered 2018 and 2 were supposed to deliver in 2019 but only 1 got the PhD degree the same year. Since the school has a limited number of PhD students, deliverance of a thesis in due time is vital. The slow flow is perhaps explanatory for the doctoral and licentiate degrees in the period 2015-2019 (n=8).

If increased quality research is a focus of the university and a goal one wants to pursue, one promotion would be to upgrade the staff of Social Work in terms of academic status overall: more persons with PhD and more professors.

In addition, if research time is allocated to staff, a suggestion would be to set some regulations on allocated research time. One suggestion could be to have a demand to publish a minimum number of publications in the Web of Science/ year to “keep” ones individually allocated time. And perhaps this should be a general rule for all researchers at the university.

The organisation of natural meeting points for junior and senior staff for exchange and support are important to enhance research. Localities for unofficial and official meeting points are in that respect important. Perhaps they exist but since we were not physically at ORU this is merely a general remark.

Important incentives / resources are existing at the division:

- Time for research - is allocated but not used by all
- Administration to support grant writing exists
- Support for upgrading of competence (docentprogrammet)

1.2 Are the main research areas appropriate for the unit and its development?

There are 4 research groups, 3 started only recently perhaps reflecting the “needs” in education and the qualifications of their leaders. They also seem to reflect societal needs and so the needs of the profession:

- BUR (2018): research on children and young people’s relationships
- GLOMISCO (2020): globalisation, migration, and social cohesion
- PROSA (2020): profession and organisation in Social work
- Ageing (2021): social aspects of older persons and ageing (formal and informal care, retirement, migration)

It is pointed out in the self- assessment that the themes do not cover “all” – but they do reflect “needs” in the education-and possibly also the competence of the active researchers involved.

1.3 Please comment on the unit’s reflective analysis of their environment.

Do the structures and processes create good conditions for high-quality research with regards to personnel, leadership, academic culture, national and international collaborations?

Opportunities to update and increase competence are present and very good opportunities for the educational development of staff:

- Mandatory research plan seminar (ethical – for PhD)
- Higher seminars – mandatory for all personnel
- “Docent programme” – for internal competence building

In addition, the head of division and the head of subject are in communication and try to balance the relationship between the needs of education and the needs of research.

However, a “Catch 22” exists between the need of people/ resources to teach in the basic education and the time allocated for research and competence building where the individual researcher often has to “sacrifice” time allocated for the latter.

Please provide specific comments on the unit’s research funding, publications and productivity.

The research is mainly commissioned research or paid by the municipalities. This may reflect a need or an appropriate research focus for the unit because the education of social workers should be evidence based: are the services really meeting the societal needs and are they effective?

On the other hand, the commissioned research may be perceived as “steered” research, based on the political and administrative needs. It may not reflect individual needs from users or researchers, and a worst-case scenario may be that a “critical eye” may be lost.

There seems, however, to be a promising increase of grants from 2015 to 2019.

Publications:

The number of articles has increased as well as participations in conferences with papers presented. Most of the research is still presented in books and chapters in books. The citations presented are good and have a tendency of increasing.

The productivity in terms of grants and publication is good considered the heavy burden of education and the fact that only few of the staff are active in this process. However, the total research activities and peer reviewed publications is modest in comparisons with other schools in ORU (psychology / sociology).

2. QUALITY OF THE RESEARCH

2.1 Credibility

Does the research environment produce creative and methodologically sound research of high quality? Please identify strengths and weaknesses.

Yes, it does produce creative and methodologically sound research of high quality.

Strength: Strong if one considers the commissioned research, where reviews, books, chapters in books and conference papers possibly represents the largest contribution.

Weaknesses: Weaker or not to the same extent high representation in the peer reviewed papers, where only 12 out of 53 publications were in WoS H-index 2013-2018 and 20 of 53 (38%) in CNCI >1.

2.2 Contribution

Does the research make a contribution to the literature, the field and/or society? Please identify strengths and weaknesses.

Yes, the strength is that commissioned research seems “used” and communicated. The citations have increased which strengthens the impression of importance to the fields within Social work.

A weakness may be that it is possibly not the voice of the users? Because it is mainly commissioned research, and this may to a certain extent visualise the society’s and social workers “needs” and not the “users” of the services?

In addition, one may view peer reviewed, as published papers in Web of science, to be of higher importance for the research field in terms of citations. The Social Work unit may consider strengthening the latter.

2.3 Communicative

Is the research appropriately communicated to the scientific, professional and lay communities? Please identify strengths and weaknesses.

One may argue that since the research is commissioned and used in reports it will also be communicated to the public. The individual researchers are active communicating the results to the public.

However, there seems to be a need for a publication strategy / communication not only related to the individual divisions / schools but for the whole university.

2.4 Conforming

Are there sufficient routines for ensuring conformity with standards for ethics, sustainability and other regulations?

Yes, the routines are in place.

- Mandatory research plan seminar (ethical – for PhD)
- The social work general study plan
- Higher seminars (one session devoted to this topic)

Although participation is “mandatory” it is up to individual senior researchers and PhDs to follow the routines. In view of a tight schedule, prioritising between tasks, again this “competence time” seems to crumble away. So again, there seems to be a need to organise this competence time in a better way so it may be used as intended.

3. THE UNIT'S DEVELOPMENT PLAN

Please provide feedback as a critical friend. The focus should be on how the unit may best develop its research and enhance quality over the next 5-year period.

3.1 Observations and analysis

Please provide observations, reflections and analyses regarding the unit's development plan. You should include relevance of the plan (Is the plan realistic with a focus on an important and clear path forward? Are there sufficient resources and organisation for meeting the unit's goals?) and highlight strong areas that can be enhanced as well as areas in need of development.

The evaluation plan is ambitiously written with high goals to conduct qualitatively and internationally competitive research that promotes socio-economic and social political improvements in people's lives / living conditions. Furthermore, to address challenges that transformation poses to social work conditions. The 5-year plan seems realistic, but it takes time to change the present conditions, so it seems a long-term goal.

The goals are in short as perceived when reading the self-evaluation:

1. Increased publication
2. Increased funding
3. Maintain and develop the academic culture
4. Encourage the research groups



How:

- By strategic and sustainable recruitment
- Recruitment of 2 new PhD students /year
- Improve the utilisation of existing resources
- Use employed researchers work time strategically
- Additional academic support
 - Publication (proofreading etc)
 - Application support
 - Internal support to establish national and international collaborations

There are at present few resources internally for both education and research, so the recruitment of strategic staff seems eminent to solve some problems as well as the improvement of utilisations of existing resources through, for example the “docent-programmet”. The recruitment of PhD students is reliant on both grants for support, and to deliverance of thesis within time allocated.

3.2 Recommendations

Please provide suggestions for what the unit should focus on and how improvements might best be realised.

The plan and the close collaborations you have with NGOs and municipalities seems vital to be in the “loop” for research within the field of social work.

It seems there may be gains by doing research /collaborate with internal resources such as psychology, sociology, and legal science units in a variety of research. There may also be gains with collaborations with units/departments at other national universities, especially in research with the critical eye on the profession, relating to the research group PROSA.

The four research groups are targeting vital questions and you are building them up. A suggestion would be to focus on your “strengths” at ORU and continue to recruit within the fields that “cost” you less in terms of pursuing grants, PhD candidates and supervisors.

It seems the staff / researchers must prioritise education of students on bachelor, master, and PhD levels. So, research becomes a very individual priority.

There is a need to resolve this individual “choice” by organisational measures; perhaps more staff, other pedagogical solutions to enhance student learning activities, organisation of researchers’ time in the educational part to specified “time” so that prioritised time for research is guaranteed. In short, a stricter regulation of research time related to the “production” during a stipulated period, for example the last 2 or 3 years? In addition to focus on few and selected areas, related to the strength of the research community / “what we are good at” instead of trying to cover research areas, where the division has less special competence.

4. CONCLUDING REMARKS

Please summarise your review and provide a closing statement.

The productivity in terms of grants and publication is good considered the heavy burden of education and the fact that only few of the staff are active in this process. And there are opportunities to update and increase competence through “Docent- programmet”. However, this programme is not well known among the staff. Enhanced knowledge and easy access to information about this programme may enhance internal competence building.

Overall, the Self-assessment takes up the valid points for the Division Social Work. The plan presented is realistic but must be viewed in a long-term perspective. The research groups are at a starting point and “deliverance” in terms of PhD candidates seem slow at present. This process needs to be speedier and PhD candidates need to deliver in the time allocated.

The education of social workers at the university is large. One would expect that from this body of students one may recruit future researchers. Perhaps in special programmes such as centres of excellence. In these centres of excellence, specific fields within Social Work may be promoted, preferably within fields where ORU Social Work has its specific strength for example in the “oldest” research group BUR.

However, research groups GLOMISCO and PROSA may be promising groups for the future. Knowledge about ageing is needed in society but the internal expertise at the unit of Social Work seems to be small / lacking at present. One may consider to what extent this is a necessary research area to enhance at present, considering the internal resources and the time and effort it takes to develop a sustainable expert group.

Collaboration on research themes with other internal units at the university is also something one may develop to a higher extent. The practice of Social Work is depending on existing structures of the society one practices in, like for example political and legal rules and regulations, making the international collaboration work in a heterogenous sphere. The international collaborations on global issues within the context of Social Work are important in a world where many countries experience ecological, political, or health-related crises. To what extent this should be a prioritised goal in the division Social work should be carefully evaluated, considered the “cost-benefit” when it comes to internal personnel resources.

ORU2020 Review Report - Sociology

Unit of Assessment: Sociology

Review Team 7: Hedvig Ekerwald (main reviewer), Birgitta Langhammer, Philip Hwang and Christopher Eccleston

1. QUALITY OF THE RESEARCH ENVIRONMENT

1.1 Is the environment well organised to promote quality research?

Sociology as a Unit of Assessment, here called the Sociology Unit, is well organised with two research groups producing high quality research, a Committee of Supervisors deciding the internal budget, a well-functioning Higher Seminar, and a research education for now seven doctoral students. The decisions are taken in a transparent way and the strategy is inclusion where all can participate in the two research groups and at the Higher Seminar. There are workshops for improving the project grant applications and the project article manuscripts. The self-assessment process itself bears witness of democratic relations within the Unit and an ability to tap the whole Unit for knowledge on how to improve.

1.2 Are the main research areas appropriate for the unit and its development?

The sociologists at Örebro University are well-known in Sweden for their family research and their environmental research. This research is produced in the two well-established research groups, *Environmental Sociology Section* and *Work, Family, and Intimate Relations*, which both came into existence already in 2012 as a successful result of the ORU2010. These research groups are appropriate, and they have shown to be flexible enough to adjust to new themes brought about by doctoral students or newly recruited staff.

1.3 Please comment on the unit's reflective analysis of their environment.

Do the structures and processes create good conditions for high-quality research with regards to personnel, leadership, academic culture, national and international collaborations?

Research collaboration within Örebro university is sought for and materialised in the newly established Center for Environmental and Sustainability Social Science (CESSS) led by sociology, psychology, and political science. Our advice is that this initiative should open doors for the Sociology Unit for broader and larger research grant applications.

At the same time the Sociology Unit emphasises international collaboration, materialised in work in relevant research committees of the International Sociological Association and the European Sociological Association. Concerning the Örebro family sociologists, these contacts may have contributed to the cooperation TransParent (<http://www.transparent-project.com/>) with researchers from eight European countries. It has among other things resulted in two books to which the family sociologists have contributed. Concerning the Örebro environmental sociologists, they took part in founding the journal of Environmental Sociology in 2015, now on Web of Science,

Scopus, and the Norwegian list. As one result of that work, the environmental sociologists and researchers at Lancaster University and University of Alberta have published both a special journal issue and a book on environmental sociology.

Please provide specific comments on the unit's research funding, publications and productivity.

The Sociology Unit gets grants from the most prestigious Swedish research funding bodies, such as VR (Swedish Research council), Forte and Formas. Concerning the prestigious European Research Council, ERC, an ERC starting grant has been won by one researcher of the Sociology Unit, and a larger advanced grant application is planned.

In 2019 the Sociology Unit had 2,5 million SEK of grants. It received 4,8 million SEK in grants 2015, 2,5 million in 2016, 4,2 million in 2017 and 2,3 million in 2018. It obviously varies. There is no information on the question if the 2019 result is due to a lower approval rate for the applications or if there have been fewer applications submitted from the Sociology Unit.

Looking at the whole of Sweden, the mean grant approval percentage is 10 per cent for the biggest governmental funding bodies. But the grant approval varies a lot between different higher education institutions. Of the ten universities that get most grants from VR, Lund university is on top. VR distinguishes these ten biggest receivers of grants from the many universities and university colleges which get less grants, called "Other higher education institutions", a group of which Örebro University is one. This group has more than 1.5 the number of professors than Lund, but Lund alone receives four times as large a sum of grants than the whole group of "Other higher education institutions"!

It has consequences for the choice of funding strategy at Örebro University. When it concerns the Sociology Unit, a sporting chance would be to concentrate on the two specialisations, family sociology and environmental sociology, and at the same time keep close contact with the general development within the discipline of sociology itself. This has also been the strategy of the Sociology Unit.

Considering the grant approval pattern described above, the productivity in publishing and getting grants for the Sociology Unit has been particularly good.

When it comes to publications, 90 publications are represented in Web of Science and 179 in the Norwegian Publication List. The proportion of publications in Web of Science could be bigger. Still, the result in bibliometric measures of the 90 Web of Science publications are very satisfying, with an CNCI Frac as strong as 1.5, and with 42 per cent of these articles published in journals belonging to the top Q1 journals 2017-2019. There is a clear increase in publications in Web of Science, and in citations and H-index.

When it comes to research education, there have been four dissertations at the Sociology Unit during the years 2015-2019. With the size of the unit, more dissertations could have been expected. The Sociology Unit is given 3 doctoral students by the Faculty based on the size of the staff, and 2 doctoral students through the university-initiated research schools (Successful ageing/NewBreed). The Sociology Unit can also get doctoral students by grant funding.

On a direct question from the Reviewer Team there seems to have been a priority of funding postdocs instead of doctoral students on grants, perhaps based on a view that PhD education can be only a minor part of the research of the Sociology Unit. If so, the recommendation is to revise this view and put the work of the doctoral students in the centre of research.

Despite a potential price of lower publication productivity with doctoral students than with postdocs (on top of the difficult demand that there is a need for several projects to go together to finance one doctoral student), the recommendation here is still to concentrate on doctoral students and make the research of the Sociology Unit be based in the research education, with more of co-authorship between supervisors and PhD candidates. Of course, postdocs are still needed, and they are more easily financed than doctoral students as the time of postdoc employment is shorter (two years). It is not a question of postdocs or not, but a question of always keeping the doctoral students in the centre of research.

The doctoral positions are widely announced by the Sociology Unit and the merits of a doctoral exam from the Sociology unit at Örebro University seem well-known in Sweden. The present announcement of one single doctoral position at the Sociology Unit has received 92 applicants and the present doctoral students are having master exams from universities in Gothenburg, Istanbul, Lund, Stockholm, Uppsala and Örebro.

2. QUALITY OF THE RESEARCH

2.1 Credibility

Does the research environment produce creative and methodologically sound research of high quality? Please identify strengths and weaknesses.

The Sociology Unit produces methodologically sound research of high quality. The strengths are the two research groups, well-known among sociologists all over Sweden. They specialise in environmental sociology and family sociology. To be specialised makes it possible for researchers at a university of Örebro's moderate size to contribute to international research.

A weakness is the difficulty to recruit new lecturers having as criteria the research specialities of the two research groups. Another weakness, in our judgment which is not shared by the Unit, is the broadness of the publication strategy in the self-assessment.

2.2 Contribution

Does the research make a contribution to the literature, the field and/or society? Please identify strengths and weaknesses.

The Sociology Unit researchers have deepened and refined the concepts of research on environment such as risk and biological diversity, and thereby forwarded the climate studies. In comparison to family sociology, environmental sociology is a relatively new field, of immense importance to society due to global warming. The Sociology Unit has also contributed to the broad old field of family sociology, the core field of social relations in a society, especially on the work-family connection, with new knowledge on the precarious conditions of being a single mother, generational exchange of care, and negotiations on housework in families.

2.3 Communicative

Is the research appropriately communicated to the scientific, professional and lay communities? Please identify strengths and weaknesses.

The relations in the new family types of our society are important to all, as is knowledge on the environmental problems in this time of climate crisis. The research results are communicated to other researchers and experts, in published articles and books. The community that is continuously

reached is the students following the courses taught by teachers from the Sociology Unit and reading the textbooks produced by it.

A general lack of competence in research communication in the Swedish academy is recognised by the VR in several new publications. To construct a continuously updated well attended website within the areas of real research interest of the Sociology Unit would be rewarding. Not mentioned in the self-assessment but found by serendipity is the following, which is a good start: <http://orebrosociologi.weebly.com/>

2.4 Conforming

Are there sufficient routines for ensuring conformity with standards for ethics, sustainability and other regulations?

Research ethics, always important in the social sciences, is included in seminars and workshops of the Sociology Unit. The Sociology Unit is even the one unit which is responsible for the PhD course of the whole Faculty in research ethics.

Higher education institutions shall promote sustainable development according to the Swedish Higher Education Act, and Örebro university has a policy for sustainable development (ORU 1.2.1–00307/2017). No research unit at Örebro University could be more in line with this policy than the Sociology Unit. Climate impact is considered when conference participation is planned (modes of transport etc), in accordance with the environmentally engaged sociology research. In the plan for the next 5-year period the goal is to work for a sustainable internationalisation with less climate impact. This goal demands increased competence to use communication via Zoom etc. The topics are discussed in a reflexive way in the self-assessment of the Unit.

When it comes to other regulations in the Swedish Higher Education Act such as to promote equality between women and men and to widen the recruitment to higher education, it seems that the inclusive policy of the Sociology Unit fits into these regulations.

3. THE UNIT'S DEVELOPMENT PLAN

Please provide feedback as a critical friend. The focus should be on how the unit may best develop its research and enhance quality over the next 5-year period.

3.1 Observations and analysis

Please provide observations, reflections and analyses regarding the unit's development plan. You should include relevance of the plan (Is the plan realistic with a focus on an important and clear path forward? Are there sufficient resources and organisation for meeting the unit's goals?) and highlight strong areas that can be enhanced as well as areas in need of development.

The plan is to maintain the strong sides of today's research. In the vision of the Sociology Unit, it is said that the doctoral students should be embedded in the research groups as learning environments, and that the research education should have a good reputation in Sweden to ease recruitment of new doctoral students. The plan is also to develop weaker sides of the Sociology Unit and increase the external research funding, develop the research communication, and collaborate both within Örebro University, such as with CESSS and gender studies, and externally, with international exchange and co-operation. The plan also envisions a research program for each

research group on how the research group as a whole can contribute to its field of research. The plan is realistic and seems effective for developing the Sociology Unit's research.

In general, it is a good plan, but we disagree on two of the points: 1. The publication strategy, and 2. The importance of the research education. See below, 3.2.

3.2 Recommendations

Please provide suggestions for what the unit should focus on and how improvements might best be realised.

Using "norm", the central concept of sociology, we can see how the norms for research quality vary between organisations, and also change over time when we compare university rankings such as Times Higher Education (THE) World University rankings (from 2004), the Shanghai ranking (from 2003), the QS ranking (from 2004) and the Leiden ranking (from 2006). An example of change is that one of them has recently added an "Impact ranking", from the aspect of the 17 Sustainable Development Goals of UN (the THE World University ranking).

The rankings, taken together, have propelled globalisation with an increased comparability of higher education institutions of the world. Among the consequences are a certain homogenisation of research norms, and a narrowing down of norms for research quality. Thereby, research approaches sports in its global commensurable measurement of quality. The monograph tradition of the humanities and the hybrid monograph-article tradition of the social sciences are being replaced gradually by the article tradition of the natural sciences.

Against this background, the next five globalisation years must bring an investment of the Sociology Unit in a *critical adjustment* to this outer structure. Such an adjustment with its article writing, international recruitment of staff and doctoral students, and a use of English in the everyday work of the research environment, must be combined with a local approach which supports structures encouraging interest in research and a fit of research to chosen problems of the local society, in sum a global approach, marked by both local and global considerations. How can this be done?

Suggestions to be considered are the following:

1. *Discuss* within the Sociology Unit the above *globalisation structure* and how the Unit can critically adjust to it.
2. *Sew together the divergent interests and competences of the staff, to broader research goals.* Judging from the different self-assessments and from ORU.se in general, there is an intensive collaboration within and between research teams and research environments. Build on this existing collaboration and lessen a focus on individually based research, coordinated only by the higher research seminar. In such a move, apply for program grants, involving in each a team of researchers, and support also individual research projects collaborating in satisfying broader research goals of the Sociology unit. The plan of the Sociology Unit to continue with the appointed coordinators of the two research groups as well as to formulate research programs for the two research groups are in line with this suggestion.
3. *Adopt a new publication strategy* that focuses on articles in English aiming for the top-level international journals, instead of the present broad strategy described in the self-assessment p.11 ("A strength is that we have a broad publication strategy"). There are pros and contras combined with this suggestion of a narrower publication strategy but with today's rapid homogenisation within the global university research area, the main measure is probably going to be bibliometric results, where articles in top-level journals will be most

valued. The common ranking systems are often based on both academic reputation and bibliometric measures. The more and more popular Leiden ranking builds more fairly only on publications. To have a new publication strategy prioritising top-level international journals but at the same time valuing calmness and joy in research is a way of “render unto Caesar the things that are Caesar’s, and unto God the things that are God’s” (Mathew 22:21).

4. *Continue to apply for ERC grants*, such as the 2019 starting grant and the planned advanced grant application of the Sociology Unit and seek out partners with whom the chances for receiving such grants will increase.
5. *Put the doctoral students and their research in the centre of the research strategy of the Sociology Unit*. A successful graduate education with many dissertations, and with co-publication of doctoral students and their supervisors, is the ground for a research environment of good quality. Make use of the present rules allowing for two articles in a compilation thesis to be co-published with the supervisor. This would mean a revision of common publication norms concerning doctoral students within the discipline of sociology in Sweden. It must be thoroughly thought through and discussed in terms of pros and cons (monographs versus compilation theses, autonomy versus productivity, and loneliness versus teamwork). We argue that it would increase the quality of the articles for the doctoral student, and it would increase the publications of the supervisor. This co-publication model from the natural sciences is still rare within the social sciences, where it is mostly practiced within psychology and economics.

4. CONCLUDING REMARKS

Please summarise your review and provide a closing statement.

The Sociology Unit is producing research of high quality. Its research is famous in Sweden, and it also has a certain international reputation. It shares the condition of many units today, to be dependent on intermittent funding from outside the university. The safe way forward, in our view, is to combine a close knowledge of the changing core of the discipline of sociology, with a specialisation, aiming at being the leading in Sweden and having an impact also on the European level within the chosen research specialisations. The way goes through publishing in high impact journals recognised by the Web of Science, that is, a narrowing down from today’s broader publication strategy. It is also making the doctoral education the heart of research of the Sociology Unit.

The Review Team wishes the Sociology Unit success in the present prosperous specialisation of the Sociology Unit, and in the continuation of publishing in highly ranked journals and of strengthening the ERC funding.

ORU2020 Review Report - Studies in the Humanities

Unit of Assessment: Studies in the Humanities

Review Team: Otto Fischer (main reviewer), Alexandra Kertz-Welzel and Christian Fuentes

1. QUALITY OF THE RESEARCH ENVIRONMENT

1.1 Is the environment well organised to promote quality research?

The research environment Humanities is organised as a multidisciplinary research environment, consisting of five sub-divisions, namely English, History, Literature, Rhetoric and the Swedish Language, each headed by a designated “specialisation coordinator”. The research environment Humanities is led by a “Head of Subject”. The staff consists of four professors, 22 senior lecturers, one associate senior lecturer, one researcher and one postdoctoral researcher. The Unit of Assessment (UoA) currently employs 11 doctoral students. The output from the PhD-education is 12 doctoral degrees in the past five years.

There is common seminar that convenes weekly, alongside staff meetings (three times/semester common to the UoA) where questions pertaining to research are discussed. The specialisation coordinators meet monthly for an informal lunch meeting.

There is a PhD-program common to all of the participating subjects. Apart from the sub-divisions, research is organised in a number of transdisciplinary areas of research, such as “Teaching and Learning in the Humanities” (TLH), “Language and Rhetoric in Society” (LaRS) and “Narration, Life and Meaning” (NLM). The self-assessment (henceforth: SA) stresses the fertile cooperation between the participating disciplines, and how a multidisciplinary research environment increases the necessity of disciplinary self-reflection and necessitates the ability to communicate outside one’s own discipline. Simultaneously, however, there is a perception that the full potential for cross-disciplinary cooperation is not fully realised, and that more systematic structures need to be in place to encourage collaboration. Still, on the other hand, there is a perceived potential conflict of interest between the need for intradisciplinary scholarly development and the demands put on the disciplines in a multidisciplinary environment.

The SA also stresses the importance of growth, quantitatively, but also through the incorporation of other disciplines of the humanities (such as Art history, Philosophy, possibly other languages) in the environment.

Strategic measures are in place to encourage and facilitate research endeavors, as for instance the organisation of writer’s retreats. The UoA uses internal research funds to cover conference fees and other costs associated with the participation in conferences, and also supports the organisation of workshops and conferences. There are also means available for translation and language editing.

There is a policy for international and national collaborations in place, and the SA stresses that collaborative initiatives taken by the researchers are encouraged and supported financially.

A critical point, pointed out by the SA is the possibility to free time for research and applications' writing, given the administrative and teaching workload for senior researchers.

1.2 Are the main research areas appropriate for the unit and its development?

Research at the unit of assessment (henceforth: UoA) is, in keeping with a strong tradition within the humanities, initiated by the individual researchers in a bottom-up-, rather than a top-down-perspective. Still, opportunities for collaborative research, engaging several of the participating disciplines, have been identified and developed into common research areas. It is, accordingly, our contention, that these research areas are appropriate. As the SA stresses however, incorporation of further disciplines within the now, disciplinarily rather limited framework, would be beneficial for the development of research at the UoA.

1.3 Please comment on the unit's reflective analysis of their environment.

Do the structures and processes create good conditions for high-quality research with regards to personnel, leadership, academic culture, national and international collaborations?

It is our strong impression that the structures and processes create good conditions for high-quality research, although the SA points out several points where conditions can be improved. The reflective analysis in the SA testifies to a very high awareness of the importance of creating a fertile academic culture and of the role of leadership as well as local, national and international collaborations. This awareness comes to the forefront throughout the SA, and is, in our view, a strong testimony to the productive efforts being put in to these matters at the unit. The UoA strives to promote a friendly, supportive and non-hierarchical research environment. The success of this endeavour is, according to the SA, corroborated by the staff members. Senior researchers are encouraged to include more junior researchers in their network and in collaborative ventures.

The SA also identifies a number of hurdles that need to be addressed, one such being the inclusion of persons of all genders within staff and leadership, another being the difficulties in combining research with administrative tasks. The potential for recruitment is dependent on the teaching and research needs of each-subdivision. The potential of attracting a large pool of competent applicants is generally good, but varies between the subjects. The UoA addresses this by using their networks to encourage potential candidates and through international advertising. Lecturers are encouraged to advance to docent (associate professor) level and are supported by the faculty with extended research time.

A problem that reoccurs throughout the SA is that the academic culture at the UoA does not fully ensure equal opportunities. As the SA points out, this is a difficult question that cannot be addressed solely at the level of the UoA, and the SA testifies to a great awareness of the problem (the issue is recurrently addressed throughout the document) However, possible, concrete measures need to be pointed out. What is lacking from the SA is also a more extensive discussion of how this problem effects the day-to-day routine of research at the UoA. That the leadership is dominated by men is of course one factor that needs to be considered, but have the experience of female researchers been investigated and are there concrete indications of the environment being less favourable to women when it comes to career development etc.?

The SA also points to the limitations of what can be achieved locally with the means at the disposal of the UoA, and where support from the faculty and/or the university is required. It is also a strength in the SA, that it addresses structural factors in the university system at large that are less favourable to the humanities, and manages to separate these from the challenges specific to the UoA.

Please provide specific comments on the unit's research funding, publications and productivity.

The UoA has attracted substantial external funding during the assessed period, and although the external funding in the overall research budget has decreased proportionally, it has grown numerically. The UoA has a strategy for increasing external funding in the future, through encouraging staff members to apply and to allow for discussions of research proposals on a regular basis.

As there are no data available from other comparable research environments it is difficult to quantitatively assess the research output. Our impression is, however, that the output from the UoA is quantitatively impressive and there has furthermore been a tendency towards a quantitative increase during the past years (although the principles of the bibliometric analysis call for caution in discerning tendencies over time, something the SA, however, does not appear to be aware of). In 2019 there was 64 publications (all categories) from 29 active researchers (not counting doctoral students), which points to a rough Key Performance Indicator of around 2. There also appears to be a tendency in the directions of more journal articles and conference papers, whereas the other categories remain on a steady level. There has also been a significant increase, when it comes to scores according to the Norwegian publication scores. As for citations, the numbers are, as per usual when it comes to studies in the humanities, not an all too efficient index of the impact of the research conducted. The UoA is reluctant to take more coercive measures when it comes to the publication strategies of the individual researchers (such as for instance directing them towards a basket of designated journals), something which in our view appears as wise and in keeping with the tradition of the humanities. There is, however, also a potential for development when it comes to the publication strategy: so, for instance, it would be beneficial if the cross-disciplinary character of the UoA, was also to a larger degree reflected in co-authored publications involving representatives of two or more of the disciplines.

2. QUALITY OF THE RESEARCH

2.1 Credibility

Does the research environment produce creative and methodologically sound research of high quality? Please identify strengths and weaknesses.

The research output at the UoA shows an impressive diversity, not only between the participating disciplines, but also within each one of these. From a humanities perspective this diversity must be considered a considerable strength. The 8 samples that are included in the material are examples of innovative, methodologically sound and qualitatively high standing research (although one wonders, parenthetically, why the UoA did not see it fit to include the 10 allowed samples). As the SA points out, important work carried out by members of staff as editors is not accounted for in the bibliometric models generally applied. Researchers from the UoA are also frequently active as keynotes, referees, members of editorial boards, opponents of dissertations and members of PhD committees. It is difficult to point to substantial weaknesses in this respect.

2.2 Contribution

Does the research make a contribution to the literature, the field and/or society? Please identify strengths and weaknesses.

The research conducted at the UoA certainly makes important contributions to the respective fields. When it comes to research in certain areas of these fields, the research at the UoA is nationally leading and internationally significant, this applies for instance (but not exclusively) to research on narratology, travel literature, fantasy literature and on the Bible as literary text (Literature), gender (English), history of sexuality, mentality and everyday life, history of the Jewish diaspora in Scandinavia, history of Scandinavian-Eastern European relations, historiography, economic history (History), literacy, reading, writing and language acquisition in a digital age (Swedish), action, visual rhetoric, multimodality and crisis communication (Rhetoric). This is an obvious strength of the research environment. When it comes to weaknesses, these are hard to discern.

2.3 Communicative

Is the research appropriately communicated to the scientific, professional and lay communities? Please identify strengths and weaknesses.

Research is communicated through book chapters, articles and conference presentations in national and international contexts, as well as through educational contexts. Several of the researchers are also engaged in publishing in newspapers and disseminating the results of their research to the general public via media and lectures outside the university. Some employees also disseminate their research through social media. There are also strong co-operations with actors of the civil society, such as for instance regional schools. Drafts of articles and choice of publication channels are regularly discussed at seminars.

2.4 Conforming

Are there sufficient routines for ensuring conformity with standards for ethics, sustainability and other regulations?

There are strong and well described routines for ensuring conformity with ethical standards, and ethics considerations are given a clear position in the doctoral education. Judging from the SA, the perspective of sustainability permeates the work done at the UoA. All researchers are required to set up a data management plan. When it comes to social sustainability, however, the issue of gender inequality within the environment needs to be pointed out.

3. THE UNIT'S DEVELOPMENT PLAN

Please provide feedback as a critical friend. The focus should be on how the unit may best develop its research and enhance quality over the next 5-year period.

3.1 Observations and analysis

Please provide observations, reflections and analyses regarding the unit's development plan. You should include relevance of the plan (Is the plan realistic with a focus on an important and clear path forward? Are there sufficient resources and organisation for meeting the unit's goals?) and highlight strong areas that can be enhanced as well as areas in need of development.

The plan envisions the further growth of the environment, and deems the addition of more subjects a realistic strategy. Growth is also considered an important factor, when it comes to continuously attracting and maintaining productive researchers. Growth is also a key factor, when it comes to making the environment less vulnerable and less dependent on the efforts in teaching, research and administration alike of a limited number of individuals. From the SA it does not become completely clear, what extra resources would need to be at hand for the UoA to meet its goals, but on the other hand the plan clearly indicates the need for consistent and predictable support from the university.

Another key factor identified, is the need to increase external research funding. More funding would free time from teaching and other tasks and would make possible even more applications. The vision is a 50:50 research-teaching situation for all lecturers; a long-time goal that is certainly commendable, although perhaps not immediately attainable. However, the plan also points to possible measures for making a more effective use of the means already disposable possible.

The plan also identifies the need for developing publication incentives adapted to the humanities and not simply mimicking the quality standards applied in the natural sciences.

The plan discusses the need of strengthening interdisciplinary and discipline specific research simultaneously.

The goals relating to sustainability are important in environmental as well as in psychosocial terms. Here, for instance, the SA points to the need of an inclusive recruitment policy.

The plan identifies a number of factors that need to be in place, in order for the plan to be carried out. Increased funding, freeing more time for research and research applications is a key factor. But the plan also points to the importance of formulating a specific strategy for the Humanities at the faculty and university level. As the SA states this is not just a question of funding, but also of attitude. The position of the Humanities within the university must be strengthened, its contributions acknowledged and a more thorough understanding of its specific perspectives needs to be developed. The communication policy of the university must also be developed to cater to the specific needs of the Humanities.

The plan appears as thorough, viable and on the whole realistic, although its success is to a large degree dependent on the possibility of being heard, listened to and understood on a university level. Our strong recommendation to ORU would be that they engage in an open and generous dialogue with the UoA, where the perspectives of the humanities are taken into stronger account than what now appears to be the case.

3.2 Recommendations

Please provide suggestions for what the unit should focus on and how improvements might best be realised.

In view of the SA and the interview, we would like to make the following recommendations:

- A strength of the UoA is its multidisciplinary character. This is an asset that needs to be maintained and nurtured. But at the same time this multidisciplinary character is something of a challenge, as the identity of the participating disciplines needs to be developed in dialogue with correspondent disciplinary environments nationally and internationally. We would recommend that the UoA takes this circumstance as a point of departure for a structured work,

aimed at developing transparent and stable structures for how to address both of these legitimate demands. Additionally, several of the participating disciplines are engaged in multidisciplinary cooperations outside of the UoA (law, sociology, pedagogic etc.), something which must be taken into consideration, when such structures are established.

- Routines for co-authoring and doing more concrete cross-disciplinary work should be developed.
- It would be beneficial, not only for the UoA but for the university at large, if further disciplines within the humanities could be integrated into the environment. This of course is a goal that cannot be attained by the UoA in itself. But we would like to take this opportunity to stress that we strongly sympathise with the ambition, and find that the SA makes a strong point in this respect.
- The issue of equal opportunities must be addressed in a structured and efficient manner. The UoA is aware of this and has reached out to the university for guidance. Here we would strongly recommend the university to support the UoA in the way they require.
- Standards of evaluation (for instance, bibliometrics) employed at the university, should to a larger degree be flexible to reflect different scholarly traditions and their respective discipline specific standards of excellence.
- The issue of administrative tasks burdening many of the more senior researchers should be alleviated.
- Currently there is no education at the advanced level in the humanities. The development of an advanced level education would crucially strengthen the scholarly environment.
- Career paths should be even and foreseeable. Currently there are reportedly difficulties (unrelated to the credentials of the potential applicants) in being promoted to full professor. Any such hurdles risk to drain an environment of scholarly talent and effect work moral negatively.
- Paramount is that faculty and university engage in an open and generous dialogue with the UoA, so that the perspectives specific to the Humanities are acknowledged.

4. CONCLUDING REMARKS

Please summarise your review and provide a closing statement.

The UoA currently puts out high-quality research and has a great potential of developing even further. The work environment is friendly and inclusive and the potential of strengthening the cross-disciplinary collaboration is significant. There are, however, some obstacles for a positive development that need to be addressed: one such being the gender imbalance within the UoA, another being the sense that the specific perspectives of the Humanities is not always fully regarded on the central level of the university. If these questions are addressed in a successful way, we are content that the UoA will have every potential to flourish.

Faculty of Medicine and Health (MH)

ORU2020 Review Report – Biomedicine, Medicine and Surgical Science

Unit of Assessment: Biomedicine, Medicine and Surgical Science

Review Team 9: Lars Klareskog, Esther Lutgens and Paulina Salminen

Introduction: As reviewers of the three units of biomedicine, medicine and surgical science we have decided to first make an evaluation of the three units together, thereby following the logic of modern medical sciences that closely integrates these areas. This is also in line with the suggestion from the scientists in the three units. This first report with comments to the entire field will be followed by specific reports for the three separate units written by the reviewers assigned to the specific units of medicine, surgical science and biomedicine.

1. QUALITY OF THE RESEARCH ENVIRONMENT

1.1 Is the environment well organised to promote quality research?

We want to emphasise the great potential of Örebro University and Örebro Region for clinical and translational science. Several of the Örebro researchers pointed out specific research areas that already are or have the potential to become (inter)nationally competitive, high class scientific endeavours. Of particular interest at Örebro is the field of 'common diseases'. A most valuable feature of the Örebro environment is the possibility to follow patients from very early stages of disease and onwards, as is reflected by the high-quality research performed in, for example inflammatory bowel disease and pulmonary disease. We feel that an increased and collaborative use of this environment from scientists within medicine, surgery and biomedicine may enable the medical research at Örebro to grow to a higher level. In this context, we were truly impressed by the opportunity for close collaboration between the university and the University Hospital and Region Örebro and by ALF funding for clinical and translational research in the form of research time for PhD students and junior scientists.

In making our evaluation and recommendations, we had great help from first talking to the selected scientists within the areas of biomedicine, surgery, and medicine, and thereafter having the opportunity to also talk with the leadership of the medical faculty.

What became evident in the discussion with the medical faculty leadership, was that there is a defined structure both at the faculty level and the school of medical sciences that discusses strategies and priorities, and that there are also regular consultancies with the scientific leadership of the Örebro Region and University Hospital. However, when talking to the selected groups of scientists, some of them expressed that they experience a lack of mechanism for enhancing collaboration and integration of research between different research groups. We were given the impression that a lack of such mechanisms may hamper the possibilities for internal evaluation, re-organisation and focusing.

1.2 Are the main research areas appropriate for the unit and its development?

Our main concern is that the current research areas appear rather scattered resulting in a large variability of focus and productivity. We believe that the best opportunities for excellent translational and clinical science lie in utilisation of the opportunities for clinical and translational longitudinal studies with the vast possibility and quite easy access to biological materials and associated clinical data. There is an obvious opportunity to use the strengths of the Örebro University and University Hospital research to focus on patients with common diseases thus enabling high-class science in this small university. Several groups are already utilising these opportunities with great success; examples are surgical sciences with enhanced recovery studies, the active use from several groups of high-class epidemiology and utilisation of large registries, and the studies of sexually transmitted diseases with strong endorsement from international collaborations.

Some other projects appeared to be more scattered without apparent alignment with the most successful clinical programs and being somewhat restricted to the local environment in Örebro. One such concern was the apparent lack of a clear strategy from the X-hide program on how to collaborate with and preferably join forces with the strong programs in inflammatory diseases and inflammation research in the medicine and surgical programs.

In making these comments, we foremost want to emphasise the great opportunities we see from combining the strengths and excellence that some of the groups presented to us in the medicine and surgical programs with research performed by groups with related competences in the biomedicine program. As for all nationally and internationally impactful research groups, the size and the composition of the groups should be such that it enables attraction of significant external funding and a capability to form and contribute to national and international networks. Senior members of these groups should educate and mentor students, postdocs, and junior researchers supporting them to also formulate their own research questions and attract their own funding. Groups not meeting these standards due to size, focus or other reasons, should be advised to join forces with other, more successful groups gradually allowing a larger portion of the scientific staff, postdocs and students to learn about how to plan, perform and publish internationally important and impactful research results. Örebro and the medical faculty is fortunate to have several such groups with good potential to form these clusters of excellence involving additional internal collaboration as well as national and international outreach. Additionally, Örebro University with its increasing ALF funding and a number of excellent research groups should have an opportunity to recruit individuals with potentials to become future research leaders in the not-too-distant future.

1.3 Please comment on the unit's reflective analysis of their environment.

Do the structures and processes create good conditions for high-quality research with regards to personnel, leadership, academic culture, national and international collaborations?

Please provide specific comments on the unit's research funding, publications and productivity.

The reflection of the environment in the self-assessment is rather general but in line with what we now try to express in more actionable format. The general comments of the groups were helpful, but not distinct enough to provide a basis for specific actions that need to be taken for the improvements that all want to accomplish. We believe that an active academic leadership from the medical faculty together with the region and the university hospital will be needed in order to enable suggestions from the groups and from us to be implemented in practice.

Concerning more specific items, we consider the self-assessment to be quite cautious, not emphasising enough the big opportunities that we see concerning strengthening and forming research groups drawing competitiveness from the clinical context, national and international collaborations/registries, and technologies. The self-assessment is also a bit too cautious concerning the needs for refocusing and re-orientation of some groups and environments that have existed for some years, but so far not been able to make major inroads into internationally competitive publications and funding from several granting agencies.

2. QUALITY OF THE RESEARCH

2.1 Credibility

Does the research environment produce creative and methodologically sound research of high quality? Please identify strengths and weaknesses.

As stated above, there is large variation and a rather scattered orientation towards several different goals and with methods that do not necessarily complement and/or support each other. Some groups have a high national and international visibility and credibility, others have much less impact. We have not identified any groups that perform research that is not methodologically sound.

2.2 Contribution

Does the research make a contribution to the literature, the field and/or society? Please identify strengths and weaknesses.

Again, a very large variability in contributions to the international fields within their areas.

2.3 Communicative

Is the research appropriately communicated to the scientific, professional and lay communities? Please identify strengths and weaknesses.

We did not specifically address these issues with the time we had, but this also often goes hand in hand with the overall performance and productivity. From a PR perspective this is an important issue making Örebro known in each field and should be assessed by the medical faculty together with the researchers. We are not aware whether Örebro University has communications or PR personnel to take an active role especially distributing the research results in the lay communities. The scientist themselves should naturally take care of their contributions in the scientific and professional communities and most likely the latter could also be emphasised with the future improvement of scientific productivity and quality.

2.4 Conforming

Are there sufficient routines for ensuring conformity with standards for ethics, sustainability and other regulations?

We have not been able to investigate these questions in detail but have no reason to believe that the research does not meet standards for ethics and other regulations.

3. THE UNIT'S DEVELOPMENT PLAN

Please provide feedback as a critical friend. The focus should be on how the unit may best develop its research and enhance quality over the next 5-year period.

We suggest

1. A more active approach from the medical faculty leadership is needed to improve the quality of the research environment at Örebro University. A main issue is to define research focus areas as a small university cannot excel in all fields. We therefore propose that a certain reorganisation should take place with more thematic clustering of the school of medicine in research areas that include both clinical and basic scientists. Each research group within such themes (focus areas) should have the size and structure either alone or in close collaboration with another group enabling all groups to be competitive for grants, participate in national and international consortia, and supervise and mentor their PhD students and postdocs.
2. As part of this re-organisation, we suggest that leaders of these themes, the research group leaders and other principal investigators, together with the present leadership of the School of Medical Sciences and the Faculty of Medicine and Health, constitute a forum where research strategies are subject to regular discussions.

We also support re-initiation of the regular researcher meetings (prior meeting of the professors) for all of the researchers to be more aware of the ongoing research by other groups further supporting active collaboration. The university should provide secretarial assistance for running these researcher meetings.

3. Consider collaboration or even integration of relevant science from The School of Health Sciences as we consider the division between health sciences and medicine a bit artificial. However, we were not able to evaluate the work within the health sciences, so this advice is made with reservation based on our limited insights here.
4. Continue to develop the relationships with the clinical and research leadership at the Örebro University Hospital and Region Örebro, aiming at sharing visions and strategies and expand collaboration and networking nationally and internationally.
5. Please see our suggestion #2. Make all the leading scientists as well as leading persons from the clinical side meet at a major retreat (at least 2 days) to consider strategies for the future, with a background of advice from ORO2020 and possibly with a few outside advisors engaged during part of the retreat time to provide further perspectives on the strategy. Such retreats should preferably be repeated at regular intervals.



3.1 Observations and analysis

Please provide observations, reflections and analyses regarding the unit's development plan. You should include relevance of the plan (Is the plan realistic with a focus on an important and clear path forward? Are there sufficient resources and organisation for meeting the unit's goals?) and highlight strong areas that can be enhanced as well as areas in need of development.

We consider the plan that was provided as a useful background for both the scientists in the units and for us. Please see above for our suggestions; we also strongly advise to be more specific and consider re-organisation and focusing around distinct scientifically defined aims, taking the benefit from the clinical context, basic research, and Örebro's specific advantages as a concise research environment into account.

3.2 Recommendations

Please provide suggestions for what the unit should focus on and how improvements might best be realised.

Please see above. We would also like to emphasise the experiences from one of us (Esther Lutgens) from the University of Maastricht, which early on (1987) made an organisation emphasising academic leadership, focusing of research on certain areas and with mandates for action and setting priorities. This way of working has been extremely productive for the University of Maastricht which is now is a leading international research university, while still maintaining its excellence in education.

4. CONCLUDING REMARKS

Please summarise your review and provide a closing statement.

It has been a pleasure for all three of us to evaluate the medical research at Örebro University. We consider your environment and collaboration with the region as a very fertile basis for the development of research lines that are not so easy to accomplish in other universities in the world or elsewhere in Sweden. As a young and small university where changes and innovations may be easier to accomplish than in older universities, we think you should be agile, open for change and curious on the opportunities provided in the interface between research and clinics.

ORU2020 Review Report - Biomedicine

Unit of Assessment: Biomedicine

Review Team 9: Lars Klareskog (main reviewer), Paulina Salminen and Esther Lutgens

1. QUALITY OF THE RESEARCH ENVIRONMENT

1.1 Is the environment well organised to promote quality research?

The environment in the area Biomedicine should according to the scientists in all three areas of Biomedicine, Surgical Science and Medicine be considered in the context of the joint environment for the three areas. This ambition was also emphasised by the leadership of the Faculty of Medicine and Health in a separate meeting between us evaluators and the leadership group.

However, it was not clear to us how this integration is accomplished and to which extent the opportunities of collaboration between the Biomedicine groups and the clinical groups in surgical science and medicine were optimally used.

More specifically, the groups working in inflammation emphasised their programs in rather basic studies of innate immunity, but did not mention any structured collaborative programs with relevant groups in Surgical Science (for example those working with resolution of inflammation) or in Medicine (for example those working with inflammatory bowel diseases or inflammation in airways). Similarly, the groups working with cardiovascular disease and inflammation in the vasculature as a basis for atherosclerosis and other cardiovascular diseases, described their access to clinical materials, but did not describe joint strategic plans for collaboration with clinical groups. We as evaluators think that development of such strategies might be rewarding both for the clinical and the biomedicine groups.

The research environment concerning funding or PhD students appears to be excellent for clinical PhD students able to get funding from the ALF system and we understand that also scientists in the biomedicine area use this opportunity. This procedure is much encouraged and, again, preferably in the context of a structured collaborative program between scientists in the unit of Biomedicine and scientists in the Surgical Science and Medicine units.

1.2 Are the main research areas appropriate for the unit and its development?

Our impression is that the areas are appropriate, with their emphasis on inflammation, sexually transmitted diseases and cardiovascular disease. We notice the large differences in productivity and access to national and international networks between the different groups in the Biomedicine field. We believe, in line with our general recommendation to the entire School of Medical Sciences, that it would be beneficial for the groups working particularly in the inflammation and cardiovascular fields to be part of more thematic environments including also the clinical groups. The group working with sexually transmitted diseases, appears well aligned with the national and international development with good networks and a good and sustained productivity. We thus recommend

further support to this group and possibly creation of more opportunities from others to learn from this group on how to establish fruitful national and international networks. We are also aware that we have not met all groups within the unit of Biomedicine and that there are probably additional scientists who may benefit from additional thematic clustering of research groups.

1.3 Please comment on the unit's reflective analysis of their environment.

Do the structures and processes create good conditions for high-quality research with regards to personnel, leadership, academic culture, national and international collaborations?

The groups describe in their self-assessment procedures for interactions with seminars and interactions, and they also emphasise the small size of the school enabling easy contacts between different scientists and different research groups. However, it is not clear for us how often these seminars take place and to which extent a well-functioning structure is in place for enhancing collaborative efforts in lab methodology, for use and development of the biobank and for taking new joint initiatives for getting access to modern lab methodology and bioinformatics. We were very impressed by the impact of the epidemiological core on several research programs in Surgical Science and Medicine, and believe that this core, together with the access to a good biobank, may be used more also in the field of Biomedicine.

Please provide specific comments on the unit's research funding, publications and productivity.

The most striking observation is the large variability in scientific productivity and funding from several sources. We were impressed by the great new funding for inflammation research from the Knowledge Foundation but noted that this is the by far most important single funding source for the inflammation groups. In line with our previous statements, we believe that a more strategic partnership between the groups in inflammation in the unit of Biomedicine with clinical groups may be the way forward towards better productivity and to secure a sustainability for future funding from several funding agencies, including international funding. Similar comments relate to the cardiovascular groups which do not have the privilege of having a strong and rather long-term funding as the inflammation groups from the knowledge foundation. We were uncertain about how much the cardiovascular groups may benefit from the resources from the Knowledge Foundation, but assume this is the case as the cardiovascular groups work mainly with inflammatory aspects of their diseases.

2. QUALITY OF THE RESEARCH

2.1 Credibility

Does the research environment produce creative and methodologically sound research of high quality? Please identify strengths and weaknesses.

We were not able to scrutinise publications from the groups in great detail, but nothing was disclosed that suggested that the research was not methodologically sound.

Concerning the quality of the research as judged from international recognition and citations, we again noted large variations between the groups, with some excellent contributions and others with sound science but with limited international impact.

Again, to mitigate the problems of this variability and the lower productivity and limited impact for some groups, we suggest to benefit more from the specific opportunities in Örebro to follow

patients with common disease over long times. Thereby use of methodologies (and funding) for the Biomedicine groups might be used more efficiently than presently for making progress and international impact together with groups that already make full use of these “Örebro opportunity”.

2.2 Contribution

Does the research make a contribution to the literature, the field and/or society? Please identify strengths and weaknesses.

The contribution to the international literature is highly variable which is commented on elsewhere in this review, with some groups providing excellent and highly impactful contributions. We also recognise that all groups and all scientists make important contributions to the educational side of the medical faculty of Örebro, which is a major undertaking from this young university. We think nevertheless that increased focusing and efforts towards clustering of groups and scientists in themes would be beneficial for the research while still maintaining the competences for research-based teaching in additional areas. As one of us (Esther Lutkens) has had the experience of successful such focusing while maintaining excellent teaching in the at the time young university of Maastricht, we believe that such a combination of strategies is feasible and potentially fruitful also in Örebro.

2.3 Communicative

Is the research appropriately communicated to the scientific, professional and lay communities? Please identify strengths and weaknesses.

We were not able to evaluate these aspects fully, but consider the close collaboration between Region Örebro and the research in the Faculty of Medicine and Health to be a guarantee that this mission is fulfilled.

2.4 Conforming

Are there sufficient routines for ensuring conformity with standards for ethics, sustainability and other regulations?

Again, we were not able to fully evaluate these aspects of the research, but we had no indications that appropriate standards in these areas were not fulfilled.

3. THE UNIT'S DEVELOPMENT PLAN

Please provide feedback as a critical friend. The focus should be on how the unit may best develop its research and enhance quality over the next 5-year period.

The plans as described in the self-assessment were in our opinion a bit too diffuse and did not outline clear strategies for the future. As also described elsewhere, we believe that a strategy involving thematic clustering and leadership for the existing groups and strategic recruitments within this strategy is needed. A major part of this proposed work would be to fully use the opportunities for collaboration between groups in the clinical fields, in particular those with great international impact, and groups within the unit of biomedicine.

3.1 Observations and analysis

Please provide observations, reflections and analyses regarding the unit's development plan. You should include relevance of the plan (Is the plan realistic with a focus on an important and clear path forward? Are there sufficient resources and organisation for meeting the unit's goals?) and highlight strong areas that can be enhanced as well as areas in need of development.

As described above, we lack a clear strategic plan that outlines how groups within biomedicine (in collaboration with group in surgical science and medicine) should use the full opportunity of the Örebro context and potential national and international collaborations. This plan should also outline strategic plans for long-term funding. As described also elsewhere, we believe that the medical faculty of Örebro has an opportunity to focus and get groups to collaborate and synergise more efficiently to accomplish these strategic goals. We also believe that the joint community of groups, while working in close collaboration with the Örebro Region should be able to be part of, and in some cases lead, national initiatives towards clinical trials, and clinical implementation of therapies in the chosen strategic areas.

3.2 Recommendations

Please provide suggestions for what the unit should focus on and how improvements might best be realised.

As stated above – more strategic planning for collaboration and focusing, while maintaining scientists' individual freedom to choose what particular problems and methodologies that they prefer to address, while proving opportunities and structures that foster collaborations and a strive towards international excellence.

4. CONCLUDING REMARKS

Please summarise your review and provide a closing statement.

Overall, we recognise great potentials for the medical research, combined with high class education at Örebro University. Our recommendations concerning strategies for enhanced integration of clinical and basic research and enhanced collaboration between groups in the same area, are based on our experiences from long-term development of translational and clinical research at other universities. We are aware that development and implementation of strategies may take time but we nevertheless think that the time may be the right one now for Örebro University to develop the type of strategies that we discuss in the present review.

ORU2020 Review Report - Medicine

Unit of Assessment: Medicine

Review Team 9: Esther Lutgens (main reviewer), Lars Klareskog and Paulina Salminen

1. QUALITY OF THE RESEARCH ENVIRONMENT

1.1 Is the environment well organised to promote quality research?

The research environment within the area of Medicine comprises of many subjects, ranging from IBD, pulmonary disease, psychiatry, sexually transmitted diseases and prostate cancer. The research is mostly clinical with some translational aspects, and the niche of 'common diseases' has a high potential. The unit of Medicine also contributes to a biobank and houses a strong epidemiology department, that shares its expertise with the different research groups. The research is to some extent intermingled with the areas of Biomedicine and Surgical Science, but structured collaborative programs with these areas are currently not established.

More specifically, the groups working in inflammation, i.e., inflammatory bowel disease, who did not mention any structured collaborative programs, or joint strategic plans with relevant groups Biomedicine (X-hide project) or Surgical Science (for example those working with resolution of inflammation). We as evaluators think that development of such strategies might be rewarding both for the clinical and the biomedicine groups.

The research environment concerning funding or PhD students appears to be excellent for clinical PhD students able to get funding from the ALF system, and clinicians have ample research time.

1.2 Are the main research areas appropriate for the unit and its development?

Our impression is that the research areas are appropriate, with their strongest research areas in inflammation (IBD) and epidemiology, sexually transmitted diseases and airway diseases. However, many more research areas are being addressed, more than a small University can possibly handle. This is reflected by the large differences in productivity and access to national and international networks and funding between the different groups in the Medicine field.

We believe, in line with our general recommendation to the entire School of Medical Sciences, that it would be beneficial for the research groups in Medicine to be part of more thematic environments including also basic research groups. For example, the group working in inflammatory bowel disease is well structured, publishes in high impact journals, and is part of many national and international networks. We thus recommend further support to this group and possibly creation of more opportunities from others to learn from this group on how to establish fruitful national and international networks. We have not spoken to all research groups in the unit of Medicine, so there are probably additional scientists who may benefit from additional thematic clustering of research groups.

1.3 Please comment on the unit's reflective analysis of their environment.

Do the structures and processes create good conditions for high-quality research with regards to personnel, leadership, academic culture, national and international collaborations?

The groups describe in their self-assessment and during the interviews that the Örebro environment is small and harbours a great potential for contacts and collaborations among scientists. Scheduled interactions comprise seminars and some meetings. However, we feel that the full potential of interactions and collaborations has not been reached yet.

For example, the 'common disease' focus is especially potent to set up high quality biobanks of plasma/serum, PBMCs and tissues, that are conserved for different analyses. Such a biobank would be essential for collaborations within Örebro, nationally and internationally and would make Örebro an attractive partner for consortium funding.

We feel that the leadership needs to take active steps to promote clustering of research and enable collaborations by mean of selective distribution of funds. This will enhance the quality of Örebro's research.

Please provide specific comments on the unit's research funding, publications and productivity.

The unit of Medicine has grown tremendously in the past 5 years and does relatively well in terms of scientific publications and funding. However, there is a large variability in research output and ability to obtain national and European funding. Only a few research groups are accountable for the total listing of high impact papers and external grant funding.

In line with our previous statements, we believe that restructuring of the research within the unit of Medicine, accompanied by a redistribution of research funds among groups with the highest potential and embracement of less successful groups by these larger, successful groups will result in better productivity and to secure a sustainability for future funding from several funding agencies, including international funding. We also recommend to increase the collaboration with groups within Biomedicine and Surgical Science to solidify the true translational research pipeline.

2. QUALITY OF THE RESEARCH

2.1 Credibility

Does the research environment produce creative and methodologically sound research of high quality? Please identify strengths and weaknesses.

Although it was hard for us to judge, we are convinced that the research that was performed was methodologically sound. The quality was highly variable between the different research groups, and not all scientific output reached the level of (inter)national competitiveness.

Again, to mitigate the problems of this variability and the lower productivity and limited impact for some groups, we suggest to benefit more from the specific opportunities in Örebro to restructure research in more thematic areas. A particularly strong aspect of Örebro is the availability of detailed follow-up data of patients with common diseases.

2.2 Contribution

Does the research make a contribution to the literature, the field and/or society? Please identify strengths and weaknesses.

The contribution to the international literature is highly variable which is commented on elsewhere in this review, with some groups providing excellent and highly impactful contributions. We also recognise that all groups and all scientists make important contributions to the educational side of the medical faculty of Örebro, which is a major undertaking from this young university. We think nevertheless that increased focusing and efforts towards clustering of groups and scientists in themes would be beneficial for the research while still maintaining the competences for research-based teaching in additional areas. As one of us (Esther Lutgens) has had the experience of successful such focusing while maintaining excellent teaching in the at the time young university of Maastricht, we believe that such a combination of strategies is feasible and potentially fruitful also in Örebro.

2.3 Communicative

Is the research appropriately communicated to the scientific, professional and lay communities? Please identify strengths and weaknesses.

We were not able to evaluate these aspects fully, but consider the close collaboration between Region Örebro and the research in the Faculty of Medicine and Health to be a guarantee that this mission is fulfilled. We feel that national and international networks can be extended.

2.4 Conforming

Are there sufficient routines for ensuring conformity with standards for ethics, sustainability and other regulations?

Again, we were not able to fully evaluate these aspects of the research, but we had no indications that appropriate standards in these areas were not fulfilled.

3. THE UNIT'S DEVELOPMENT PLAN

Please provide feedback as a critical friend. The focus should be on how the unit may best develop its research and enhance quality over the next 5-year period.

The plans as described in the self-assessment were in our opinion a did not outline clear strategies for the future. As described in our general recommendation document, we believe that a strategy involving thematic clustering and leadership for the existing groups and strategic recruitments within this strategy is needed. We also feel that the units of Medicine, Surgical Science and Biomedicine need to be seen as one that share a common vision and strategy. A major path to accomplish this would be to fully use the opportunities for collaboration between groups in the clinical and biomedicine fields, in particular those with great international impact. This strategic plan needs to involve both junior and senior scientists and requires many meetings and retreats where such plans can be presented and discussed. This should then be followed by distinct implementation of these plans from the scientific leadership that we learnt about during our follow-up session (see the common assessment for the three areas).

3.1 Observations and analysis

Please provide observations, reflections and analyses regarding the unit's development plan. You should include relevance of the plan (Is the plan realistic with a focus on an important and clear path forward? Are there sufficient resources and organisation for meeting the unit's goals?) and highlight strong areas that can be enhanced as well as areas in need of development.

As described above, we lack a clear strategic plan that outlines how groups within medicine (in collaboration with groups in surgical science and biomedicine) should use the full opportunity of the Örebro context and potential national and international collaborations. This plan should also outline strategic plans for long-term funding. As described also elsewhere, we believe that the medical faculty of Örebro has the opportunity to focus and get groups to collaborate and synergise more efficiently to accomplish these strategic goals. We also believe that the joint community of groups, while working in close collaboration with the Örebro Region should be able to be part of, and in some cases lead, national initiatives towards clinical trials, and clinical implementation of therapies in the chosen strategic areas.

3.2 Recommendations

Please provide suggestions for what the unit should focus on and how improvements might best be realised.

As stated above – more strategic planning for collaboration and focusing, while maintaining scientists' individual freedom to choose what particular problems and methodologies that they prefer to address, while proving opportunities and structures that foster collaborations and a strive towards international excellence.

4. CONCLUDING REMARKS

Please summarise your review and provide a closing statement.

Overall, we recognise great potentials for the medical research, combined with high class education at Örebro University. Our recommendations concerning strategies for enhanced integration of clinical and basic research and enhanced collaboration between groups in the same area, are based on our experiences from long-term development of translational and clinical research at other universities. We are aware that development and implementation of strategies may take time but we nevertheless think that the time may be the right one for Örebro University to develop the type of strategies that we discuss in the present review.

ORU2020 Review Report - Surgical Science

Unit of Assessment: Surgical Science

Review Team 9: Paulina Salminen (main reviewer), Lars Klareskog and Esther Lutgens

1. QUALITY OF THE RESEARCH ENVIRONMENT

1.1 Is the environment well organised to promote quality research?

Please see the joint report for general issues and comments. The main strength of Örebro University and Örebro Region is the easy access and potential possibilities for clinical and translational science due to the compact size of the Örebro researcher environment.

In the surgical sciences this is already being actively used by some research groups and PIs, but there is a lot of room for improvement within this area of surgical sciences. We have stated in our joint report the focus of Örebro University in the field of 'common diseases' as the main strength as the Örebro environment offers the possibility to follow patients from bedside to basic science and backwards. Please note that the focus on 'common diseases' does not exclude the support high-quality research on more rare disease, such as the national coordination of research within urology for penile cancer, but in a wider perspective the main focus needs to be on common issues and diseases that carry the potential for major improvement for Örebro University. For surgical research, the close collaboration between the university and the University Hospital and Region Örebro and the available ALF funding for clinical research is exceptionally good and should be taken full advantage of. We thus believe that focusing on research using this great clinical and translational asset, will be the most successful for all groups in the scientific environment that we have evaluated.

1.2 Are the main research areas appropriate for the unit and its development?

The main research areas within surgical sciences are appropriate, with the current strengths of the surgical sciences in the field of ERAS research, experimental and clinical research in anesthesiology, and diabetes in pregnancy. There are excellent registry data and research on metabolic surgery using the large national bariatric surgery registry (SOREG) and also implementing the SOREG registry to complement RCTs. As stated in our joint report, we believe that the best opportunities for excellent translational and clinical science lies in utilisation of the opportunities for clinical and translational longitudinal studies with the vast possibility and quite easy access to biological materials and associated clinical data.

Some other projects appeared to be more scattered without apparent alignment with the most successful clinical programs and being somewhat restricted to the local environment in Örebro. Within the surgical sciences, there was collaboration within the field of inflammation and ERAS, but no apparent collaboration with the X-hide program. Regarding the inflammation research, there would be a greater synergy by joining forces with the strong programs in inflammatory diseases and inflammation research in the medicine and surgical programs.

The scattered appearance was also present when looking at metabolic research especially from the presentations by all units. They presented the different research entities of “Diabetes, Endocrinology, and metabolism research”, “Nutrition-Gut-Brain Interactions Research Centre”, and “Food and Health” in addition to the inflammation research groups and entities also closely associated with metabolic research. As metabolic research is often driven by obesity due to the ever increasing prevalence of severe and morbid obesity, the surgical sciences would have a great role in joining these entities as they actually would form a kind of matrix organisation providing excellent synergy and clinical research material with clinical data and tissue biopsies for the basic research.

1.3 Please comment on the unit’s reflective analysis of their environment.

Do the structures and processes create good conditions for high-quality research with regards to personnel, leadership, academic culture, national and international collaborations?

The groups describe in their self-assessment and during the interviews that the Örebro environment is small and harbours a great potential for contacts and collaborations among scientists. Scheduled interactions comprise seminars and some meetings. However, we feel that the full potential of interactions and collaborations has not been reached yet. We feel that the leadership needs to take active steps to promote clustering of research and enable collaborations by mean of selective distribution of funds. This will enhance the quality of Örebro’s research.

Please provide specific comments on the unit’s research funding, publications and productivity.

The unit of Surgical Science has grown during the last decade and does relatively well in terms of scientific publications and funding. However, there is a large variability in research output and ability to obtain national and European external funding. Only a few research groups are accountable for the total listing of high impact papers and external grant funding.

In line with our previous statements, we believe that finding the focus fields of research within the unit of Surgical Science, accompanied by a redistribution of research funds among groups with the highest potential and embracement of less successful groups by these larger, successful groups will result in better productivity and to secure a sustainability for future funding from several funding agencies, including international funding. We also highly recommend to increase the collaboration with groups within Biomedicine and Medicine to solidify the true translational research pipeline.

2. QUALITY OF THE RESEARCH

2.1 Credibility

Does the research environment produce creative and methodologically sound research of high quality? Please identify strengths and weaknesses.

Although it was hard for us to judge, we are convinced that the research that was performed was methodologically sound. The quality was highly variable between the different research groups, and not all scientific output reached the level of (inter)national competitiveness.

2.2 Contribution

Does the research make a contribution to the literature, the field and/or society? Please identify strengths and weaknesses.

The contribution to the international literature is highly variable which is commented on in the joint report, with some groups providing excellent and highly impactful contributions. We also recognise that all groups and all scientists make important contributions to the educational side of the medical faculty of Örebro, which is a major undertaking from this young university. We think nevertheless that increased focusing and efforts towards clustering of groups and scientists in themes would be beneficial for the research while still maintaining the competences for research-based teaching in additional areas.

2.3 Communicative

Is the research appropriately communicated to the scientific, professional and lay communities? Please identify strengths and weaknesses.

We did not specifically address these issues with the time we had, but this also often goes hand in hand with the overall performance and productivity. From a PR perspective this is an important issue making Örebro known in each field and should be assessed by the medical faculty together with the researchers. The scientist themselves should naturally take care of their contributions in the scientific and professional communities and most likely the latter could also be emphasised with the future improvement of scientific productivity and quality.

2.4 Conforming

Are there sufficient routines for ensuring conformity with standards for ethics, sustainability and other regulations?

We have not been able to investigate these questions in detail but have no reason to believe that the research does not meet standards for ethics and other regulations.

3. THE UNIT'S DEVELOPMENT PLAN

Please provide feedback as a critical friend. The focus should be on how the unit may best develop its research and enhance quality over the next 5-year period.

Please see the joint report for the general feedback. Specifically for the surgical sciences, we would suggest to focus on the already existing functional and productive research groups and also to support the potential of the metabolic research entity that currently is not fully taken advantage of.

There needs to be a strategy involving thematic clustering and leadership for the existing groups and strategic recruitments within this strategy is needed. A major path to accomplish this would be to fully use the opportunities for collaboration between groups in the clinical and biomedicine fields, in particular those with great international impact. This strategic plan needs to involve both junior and senior scientists and requires many meetings and retreats where such plans can be presented and discussed. This should then be followed by distinct implementation of these plans from the scientific leadership, please see the joint report for these recommendations.

For the surgical sciences improvement, we would like to stress looking into the obvious and fruitful synergy for the metabolic research within Örebro University. The Örebro University has an established bariatric surgery program that can be a major part of the metabolic research and the track record is already there with the surgical RCTs and the registry studies. There is also close collaboration with the ERAS research and this should also be strengthened. The different research entities of “Diabetes, Endocrinology, and metabolism research”, “Nutrition-Gut-Brain Interactions Research Centre”, and “Food and Health” with the group PIs should have a very large common ground and take advantage of all of the already productive groups to enhance and plan close collaborative translational research with bariatric surgery in a large role providing clinical data and tissue biopsies. With this synergy and the utilisation of the current groups and vast knowledge around metabolic research, this close collaboration could be one of the success stories of Örebro University. This also applies to inflammation research as this plays a role in many of the metabolic disorders and should be incorporated in this focus field of Örebro Science. The scattered appearance was also present when looking at metabolic research especially from the presentations by all units.

3.1 Observations and analysis

Please provide observations, reflections and analyses regarding the unit’s development plan. You should include relevance of the plan (Is the plan realistic with a focus on an important and clear path forward? Are there sufficient resources and organisation for meeting the unit’s goals?) and highlight strong areas that can be enhanced as well as areas in need of development.

Please see above and the joint general report for details. We consider the plan that was provided as a useful background for both the scientists in the units and for us. Please see above for our suggestions; we also strongly advise to be more specific and consider re-organisation and focusing around distinct scientifically defined aims, taking the benefit from the clinical context, basic research, and Örebro’s specific advantages as a concise research environment into account.

3.2 Recommendations

Please provide suggestions for what the unit should focus on and how improvements might best be realised.

As stated above – more strategic planning for collaboration and focusing, while maintaining scientists’ individual freedom to choose what particular problems and methodologies that they prefer to address, while proving opportunities and structures that foster collaborations and a strive towards international excellence.

4. CONCLUDING REMARKS

Please summarise your review and provide a closing statement.

Overall, we recognise value great potentials for the surgical research, combined with high class education at Örebro University. Our recommendations concerning strategies for enhanced translational and enhanced collaboration between groups in the same area, are based on our experiences from long-term development of translational and clinical research at other universities. For the surgical sciences, we would suggest to have the metabolic research as one of the main focus



areas as this would be built on the already existing productive groups bringing in the bariatric surgery field also incorporating the excellent ERAS studies. We are aware that development and implementation of strategies may take time but we nevertheless think that the time may be the right one for Örebro University to develop the type of strategies that we discuss in the present review.

ORU2020 Review Report - Disability Research

Unit of Assessment: Disability Research

Review Team 8: Karin Sonnander (main reviewer), Anders Kottorp, Douglas Booth and Bjöörn Fossum

1. QUALITY OF THE RESEARCH ENVIRONMENT

1.1 Is the environment well organised to promote quality research?

The unit Disability Research comprises of 1 full professor (70 %), 1 adjunct professor (20 %), 6 senior lectures, 1 lecturer, 7 affiliated researchers and 10 PhD students (recruited 2010-2019). Most activities related to research are mainly dependent on external grants. Despite the limited number of staff, the unit is successful in receiving external funding and publishing quality research. The research environment is well organised with regular seminars and meetings to suit the needs of the unit, i.e. critical scientific exchange and future planning. The fact that the full professor in audiology belongs to the School of Medicine and other staff to the School of Health Sciences or have external employment requires mutual interests and good collaboration.

The main external collaborators are Region Örebro County, RÖL (Audiological Research Centre, AudF, and University Health Care Research Centre UFC) and the Swedish Institute of Disability Research (SIDR) at Linköping University and Jönköping University. The unit has been a partner with SIDR in postgraduate education and research for 20 years. The SIDR contract was terminated in 2021, which has consequences for especially the joint postgraduate programme. A successor to the full professor in disability research, who retired some years ago, has not yet been recruited nor has a staff member been promoted to professor. In the long run this will most certainly hamper a sustained development of consolidated quality research even though the unit, at present, is most productive.

1.2 Are the main research areas appropriate for the unit and its development?

The present four research areas of the unit are: Clinical Hearing Research, Deafblindness, Disability and Working Life and Clinical Disability and Rehabilitation Research. The four areas span the disability research field appropriately and overall captures the impact of disability in significant perspectives. However, the number of senior staff is limited and consequently each research area is small in size, although, there is frequent scientific collaboration. Moreover, the core research areas focus on hearing, i.e. Clinical Hearing Research and Deafblindness, which is described as an imbalance. In order to achieve a focus on disability research the two other research areas (Disability and Working Life and Clinical Disability and Rehabilitation Research) need strengthening by targeted support such as recruitment of senior staff.

1.3 Please comment on the unit's reflective analysis of their environment.

Do the structures and processes create good conditions for high-quality research with regards to personnel, leadership, academic culture, national and international collaborations?

Please provide specific comments on the unit's research funding, publications and productivity.

The absence of a successor to the previous professor certainly influences the structural preconditions and processes for creating high-quality research. Nevertheless, the unit has obtained external funding, recruited PhD students as well as recruited two senior lecturers and one adjunct professor (temporary part-time employment) during the last years. The environment is well organised with regular seminars and meetings with specified purposes.

The unit's need of research competence is carefully considered when recruiting to hearing science/audiology (undergraduate level). Career planning for PhD students starts early in order to maintain unit competence. A major challenge is that all members of the unit are employed elsewhere (within or outside the university) and have limited time available for research, which indicates a major dependence on external research grants. There is support (by ALF funds) available for promotion to associate professor (docent) for employees at Region Örebro, which is not generally available for employees at Örebro University. The strength concerning leadership is the small size of the unit, which requires senior staff to share leadership roles and administrative tasks. This also constitutes a weakness since time set aside for such tasks are not defined. However, the unit has set up a steering group which constitutes an effective leadership capacity. All the same, a professor of disability research would entail a significant contribution to the cohesive work necessary for an effective leadership.

Collaboration with other settings provides valuable experiences of different research cultures, but is also described as a challenge to their common research culture. However, the past collaboration with SIDR has most certainly provided the unit with a firm joint perspective as a necessary asset for an equal partnership in continuous collaboration with other units and/or schools.

The publications are of good quality. The publication strategy is most appropriate and should be maintained and developed along the proposed lines. The number of conference papers is proportionately high and could be decreased in favour of journal articles or limited to abstracts published in peer-reviewed journals.

Collaborations with governmental and non-governmental organisations, which is typical of disability research settings, is exemplary. Besides dissemination of research results, collaborations provide opportunities for research projects, collaborations and funding. The unit's awareness of these possibilities is high and the collaborations well developed. National and international research collaboration is also well developed given the limited number of staff and PhD students, but should be chosen strategically.

The unit has been successful in receiving external funding. Grants from The Swedish Research Council and The Swedish Research Council for Health, Working Life and Welfare are a special merit. There is a strategy in place for promoting research applications and available internal support resources are used. The limited number of staff available for applying for larger grants constitutes the main weakness; although those available are successful. Sustained successful funding by grants could be further strengthened by a professor in disability research.

2. QUALITY OF THE RESEARCH

2.1 Credibility

Does the research environment produce creative and methodologically sound research of high quality? Please identify strengths and weaknesses.

The unit produces research of good/high quality. Total count of publications 2013-2019 were 252 of which the majority were journal articles (153). Around 32 % of total publications were conference papers. The unit publishes around 20 journal articles per year with a Web of Science coverage of 87.6 %. Typically, publications were authored by one unit author together with authors from other units or externally. The proportion of publications authored by unit staff only is estimated at 22 % and by two or more unit members at 9 %. The impact factor level of the journals chosen is overall very good, considering that the subject category level rarely exceeds 3.0. The majority of citations for the 103 publications cited were found in the TOP 25 % which indicates room for development. H-index was estimated at 16.

Despite a limited number of staff, the unit has been successful in obtaining external funding and has received invitations to collaborate with other environments, to hold lectures, to have government assignments, to be appointed board member of research funding agencies etc. This indicates a strong credibility. However, there is an obvious risk that external assignments, although at times research-related, may limit the time spent on actual research activities and the number of high-quality publications. Balancing the two is often a dilemma. The self-assessment knowingly reports a need of a yearly account of assignments.

2.2 Contribution

Does the research make a contribution to the literature, the field and/or society? Please identify strengths and weaknesses.

The contribution of research to the literature is accounted for under 2.1. In addition, the unit collaborates extensively in terms of dissemination of research results and sharing their expert knowledge. In addition, staff members have assignments as reviewers of scientific manuscripts, serve as members of examining committees and as external reviewers. The disability research field has great societal relevance and the unit's tradition of collaborating with society is strong and well established. These outreach activities should be recognised by the university. Although the unit's contribution to society is strong the challenge is to find a balance with other academic tasks.

2.3 Communicative

Is the research appropriately communicated to the scientific, professional and lay communities? Please identify strengths and weaknesses.

The research is appropriately communicated to the scientific and professional communities through publications as well as frequent participation in scientific conferences (cf. 2.1).

The research is appropriately communicated to different communities as there is a strong tradition in knowledge transfer, research dissemination as well as organised collaboration with society (governmental and non-governmental organisations) and clinical settings.

2.4 Conforming

Are there sufficient routines for ensuring conformity with standards for ethics, sustainability and other regulations?

Knowledge of research ethics legislation and associated requirements is taught in a third-cycle course (doctorate course) for PhD students. The room for improvement raised by PhD students is the need of extended supervision when writing applications to the Swedish Ethical Review Authority. They also stressed the need of highlighting sustainability in research. Challenging situations when deciding on authorship was raised as a possible weakness. The Vancouver Rules for Co-Authorship should be used if not already taught in doctorate courses.

3. THE UNIT'S DEVELOPMENT PLAN

Please provide feedback as a critical friend. The focus should be on how the unit may best develop its research and enhance quality over the next 5-year period.

3.1 Observations and analysis

Please provide observations, reflections and analyses regarding the unit's development plan. You should include relevance of the plan (Is the plan realistic with a focus on an important and clear path forward? Are there sufficient resources and organisation for meeting the unit's goals?) and highlight strong areas that can be enhanced as well as areas in need of development.

The unit Disability Research is one of the current few strong research environments in Sweden focussing on disability with an interdisciplinary or multidisciplinary approach. Provided current conditions, few academic staff with limited time for overall research activities, the unit has been very successful in receiving national allocated grants and consequently able to recruit PhD-students as well as producing research of high quality with a particular strength in contribution and commitment. These activities should be maintained and enhanced along the lines presented by the unit.

It is advisable at least for now to keep the present research areas, which so far have been successful to firmly establish a profile of the unit. The imbalanced research area structure of the unit as well as the overall few academic staff employed and an overall unclear organisation due to the recent termination of the collaboration by contract with other universities are highly relevant areas in need of development. These areas most certainly require additional resources, which will enable the unit to maintain and especially develop their present research activities.

3.2 Recommendations

Please provide suggestions for what the unit should focus on and how improvements might best be realised.

The unit Disability Research should take action on the vision presented and be confident in their own line of research and focus on consolidation when appropriate. A change of the unit's Swedish name is strongly advised, because handicap (Swedish handikapp) is long ago advised against internationally and nationally (cf. term bank The National Board of Health and Welfare). The unit's activities represent disability research appropriately, but the present inner structure needs a better

balance between the four research areas which in themselves are successful. To include new research areas is not advisable at present, but rather to develop and deepen the ones already established. To put it briefly, focus on present research strengths and develop those. A successor to the full professor, who retired some years ago, should be recruited in order to have a head of subject, i.e. disability research. Alternatively or in addition, a senior lecturer should apply for promotion to professor in disability research or (if needed) faculty and/or school could provide conditional resources for acquisition of qualifications for promotion to professor in disability research. The unit would most certainly benefit from an associated senior lecturer.

Since a future post-graduate programme depends on external collaboration an alternative to consider could be to offer elective post-graduate course/s. The strategic plan for grant application set up by the unit's steering group should be applied to publications, authorship and collaborations as well. National and international research collaboration should be chosen wisely so that long-term collaboration and high-quality exchange can be established and thrive. Provided that there are mutual interest, a closer collaboration with schools and units at Örebro University might be a way to strengthen the links to those university settings where some of the senior staff teach and/or are employed. An annual report including unit activities e.g. grants, publications, outreach activities, and assignments could be composed at unit level as a basis for own feedback and follow up.

4. CONCLUDING REMARKS

Please summarise your review and provide a closing statement.

Considering the limited number of staff and time available for research the unit has been highly productive although heavily dependent on external funding, which they have been successful in receiving. The vacancy of a professor in disability research should be noted. For global trustworthiness the unit's Swedish name should be changed. The unit's activities should be maintained and enhanced largely according to their plan and recommendations presented, but requires, besides the unit's own efforts, additional resources in terms of support, recruitment and options for career development.

General observations pertaining to other parts of the university concern how outreach activities are recognised, a seemingly overall staff unawareness of the university financial system, less visible research collaboration between units and the need of clear career development options for the essential stimulation of academic staff.

ORU2020 Review Report - Nursing Science

Unit of Assessment: Nursing Science

Review Team 8: Björn Fossum (main reviewer), Karin Sonnander, Anders Kottorp and Douglas Booth

1. QUALITY OF THE RESEARCH ENVIRONMENT

1.1 Is the environment well organised to promote quality research?

Yes, but some improvements could be done, in areas such as increasing time for research among PhD students, PhDs, senior lecturers, and associate professors.

The unit has four professors (full time, 100 %) and one visiting professor (part time, 25 %), one adjunct senior lecturer (part time, 5 %), one associate senior lecturer (fulltime, 100 %), and 23 senior lecturers (part or full time, 70-100 %). Furthermore, the unit has 29 nurses as PhD-students within nursing science. Few PhD students are full time; the majority is part time at the University, at in the University Hospital or in other health care services. Some PhD students work as teachers at the unit part time. These numbers reflect the situation on December 31, 2019.

The unit co-operates around research with the University Hospital of Örebro. This has proved to be a productive relationship. However, a few problems were identified:

- There is a need for more senior PhDs in the unit.
- Researchers confront high administration loads.
- There is the lack of opportunity for associate professors to reach the professorial ranks.

1.2 Are the main research areas appropriate for the unit and its development?

There are four research environments: Care about caring; Perioperative Nursing; The child, the family, the caring system, and the society; Older people's health and living conditions, from cell to society. This seems to be a huge field to cover. On the other hand, it follows the education of nurses.

Each research environment includes 3-4 research groups working with several projects in specified areas. It is an impressive range of areas although, some areas appear to be conspicuously absent: public health, mental health nursing, transcultural nursing, and occupational health care. The latter, and physical touch in caring may be included in psychosomatic health. This is not necessarily peculiar to Örebro University; nursing science typically includes too many areas.

Nonetheless, we recommend the Unit of Assessment (UoA) some overarching theme(s).

1.3 Please comment on the unit's reflective analysis of their environment.

Do the structures and processes create good conditions for high-quality research with regards to personnel, leadership, academic culture, national and international collaborations?

The unit is networking and collaborating within and outside Sweden. This is important, but it also is time consuming, due to all other activities in which the UoA is involved. Today the invitations to networking are extensive, a researcher could be member of four-five or more national and international groups.

The academic culture is well developed. After discussion with one PhD student we recognised that there are several informal ways and opportunities for meeting researchers and supervisors. We think senior researchers could stimulate the junior ones, and the other way round. It is important that you have an environment where you could have formal and informal debates, discussions, and spontaneous conversations regarding research issues.

Also, that you have discussions in other overarching areas related to the context of human interactions, e.g. philosophy, sociology, public health sciences, anthropology, and problems in the health care, such as the increasing number of complaints and problems retaining nurses in the profession.

Please provide specific comments on the unit's research funding, publications and productivity.

Not all PhDs, junior as well as senior lectures, are actively applying for grants and funding. The unit has some extensive grants, but we think the search for grants and funding could be developed, by applying for more grants and more diverse grants.

Not all PhDs produce publications, however, a great number of publications is recorded. It seems that the unit would profit from one person serving as a spokesperson for the school of nursing research, and from an administrator who is responsible for maintaining the academic part of the work, such as remember to collect all applications, remind researchers of due dates for applications, and identify funding sources. Ideally, the UoA would also organise an internal structure to review and improve applications.

2. QUALITY OF THE RESEARCH

2.1 Credibility

Does the research environment produce creative and methodologically sound research of high quality? Please identify strengths and weaknesses.

Some of the researchers have been invited as keynote speakers, and some have been part of expert panels as well as part of evaluation boards for national grants.

The number of top 25 % publications; full publications, citations, and fractionalised counts has increased during the years between 2013 and 2018. Collaborations: national and international co-authorships have increased as well (2013-2019). This we consider as major strengths.

2.2 Contribution

Does the research make a contribution to the literature, the field and/or society? Please identify strengths and weaknesses.

Some of the staff are often invited as experts in national or regional groups as well as in Europe. With regard to innovation, the UoA is contributing in several different areas (e.g. medical bandaging), both locally and in Sweden. This we consider as major strengths.

In noting the research focus on what professional's think are problems, we wonder whether any thought has been given to considering the experience from a patient perspective, and in particular new groups of patients? The concept of experiences needs addressing, what do we know about patients' expectations, and what do we know of their level of satisfaction? Research has showed that satisfaction is important for nurses to achieve compliance, but this does not necessarily translate into patient safety and comfort, and satisfaction for patients and their relatives. Maybe nursing science must be influenced from other areas, to develop cooperation with patients and to invite them as co-writers in research. This is important within groups of patients we find difficult regarding compliance. Examples, among others, could be refugee patients with post-traumatic stress syndromes, and nursing applying transcultural knowledge.

2.3 Communicative

Is the research appropriately communicated to the scientific, professional and lay communities? Please identify strengths and weaknesses.

The UoA has produced textbooks and chapters in anthologies and today is communicating with broader audiences via digital media, including new forms such as blogs and twitter.

2.4 Conforming

Are there sufficient routines for ensuring conformity with standards for ethics, sustainability and other regulations?

Ethics is a highly important topic in nursing research as well as in nursing education. We note that researchers in the UoA often discuss potential ethical risks and before they start a research project and apply for ethical approval. No project is ever started before ethical permission has been received.

3. THE UNIT'S DEVELOPMENT PLAN

Please provide feedback as a critical friend. The focus should be on how the unit may best develop its research and enhance quality over the next 5-year period.

3.1 Observations and analysis

Please provide observations, reflections and analyses regarding the unit's development plan. You should include relevance of the plan (Is the plan realistic with a focus on an important and clear path forward? Are there sufficient resources and organisation for meeting the unit's goals?) and highlight strong areas that can be enhanced as well as areas in need of development.

A major part of the vision concerns education, not surprisingly because the unit has a heavy educational workload. A lot of development seems to be focused on pedagogy and support of junior lectures.

It is good that the plan has a strategy towards increasing external funding, however it would be easier if the resources were used more efficiently. As mentioned above it would be desirable to build a profile or profiles in selected areas, preferably those that address social challenges.

We find your research more than adequate compared to other nursing research units. It would be great to do research in other fields than “experiences” which is the most common keyword.

Concerning qualitative research, we would suggest that you diversify methods beyond content analysis, such as applying phenomenological, phenomenographical, grounded theory and hermeneutical, and mixed methods. These methods, in qualitative studies, could deepen the quality, go further in the analysis, and get influential results. Studies with mixed methods are in great need in Nursing Science. However, it is not easy to conduct studies with a mixed method design, where you use both qualitative and quantitative methods; to solve advanced research questions, or understand complex phenomena, mixed methods are desirable.

The following three areas below maybe you are already studying, but there are increasing needs for, namely:

There is a lack generally of studies about groups who does not follow health education or advice, who continue using too much alcohol, tobacco or drugs, who have severe obesity, use too much sugar and unhealthy food – we know from studies that the most difficult groups to inform are people with low socio-economic status. Is our health education the best option or is our education aimed at “people like us”? Do we have difficulties communicating with people who are different from us? While we acknowledge that these questions are provocative, we also note that socio-economic status, loneliness, and isolation impose great burdens on health care.

Another area that would benefit from research concerns the increase in complaints. The same regards education, we do not know how to communicate when patients show dissatisfaction with the health care.

Finally, we often say there is a lack of health personnel, but on the other hand we know that many thousands of recently qualified nurses do not work as nurses, why is it like that?

3.2 Recommendations

Please provide suggestions for what the unit should focus on and how improvements might best be realised.

1. Employ a research leader and a research administrator. There is a need for a person to coordinate research.
2. Apply for more external grants.
3. Increase the number of full time PhD students.
4. Consider the three main keywords of the 344 publications: experiences, nurses, and care. Which keywords are desirable for the coming five years? We hope to find keywords like: communication; person-centredness; shared decision making; relation; patient power; philosophy: CAM or CAN (complementary alternative medicines or complementary

- alternative nursing); self-care; home care; team; belief and trust; health beliefs; and (in Swedish *bemötande*); manner, bedside manner, approach, kind treatment, relationship.
5. One possible recommendation to reflect on for Nursing Science development could be the close institutional attachment to medical science. This could have several benefits; it could also imply a role as a younger sibling. We know from other universities in Sweden and abroad that is the best to separate these areas, if you must include other sciences is better to choose occupational therapy science and physiotherapy science.
 6. We understand that some researchers are more active producing scientific papers; is it possible that these could stimulate those who are less productive in writing papers?
 7. Positions for career development are restricted; promotion to professor is essential for academic staff, both for personal development, as well as to create an attractive workplace.
 8. Another area is an option for senior PhDs to both have a position as university hospital head nurse and a position as a researcher at the university, which is important regarding exchange and disperse research knowledge and clinical skills. A recent doctoral thesis from Karolinska Institutet discusses the escape from the hospitals of nurses with PhDs. Usually this is not a financial problem; a university head nurse with a PhD has a higher salary than an associate professor, the problem is organisational. It is hard to imagine any medical school with no combination positions between the university hospital and university.

4. CONCLUDING REMARKS

Please summarise your review and provide a closing statement.

After reading the self-assessment, and after the meeting with some of the associate professors and professors, as well as the PhD-student – and the discussions in the review team - we find that the unit has a high educational burden, which we think they are doing excellently.

The research is not always the highest priority, but you have a great competence and skills in your group, you are still striving to develop the very best research. To succeed with that one must always have discussions and awareness how to improve methodology, how to find roles and positions – in the academic field. In other countries, both in Europe and elsewhere, nursing education it is not so research oriented as it is in Sweden. That is evidently a challenge, but also a possibility.

We find that the Nursing science unit is doing a great effort and contribute within important research. The number of PhD students is high, and the production of scientific work is very good. The Örebro university should be a good and attractive workplace as well as career opportunity.

ORU2020 Review Report - Occupational Therapy

Unit of Assessment: Occupational Therapy

Review Team 8: Anders Kottorp (main reviewer), Karin Sonnander, Björn Fossum and Douglas Booth

1. QUALITY OF THE RESEARCH ENVIRONMENT

1.1 Is the environment well organised to promote quality research?

The Occupational Therapy (OT) Unit of Analysis consists of 10 employees with varying time allocated for research; 7 out of 10 have an employment of more than 70 % that can be viewed as a “physical” indication of a critical mass of people. Five out of ten are senior lecturers with (with some exception) limited allocated time for research on a basic level. Four out of ten meet the criteria for “docent”. Five out of ten of the employees are born 1956 or earlier, which indicates an (already) immediate strategic recruitment phase in order to sustain and foster further development of the Unit of Assessment (UoA). Three out of 10 are either adjunct or visiting professors. All of the listed employees are female, which is not surprising in OT of health sciences in general, so this lack of diversity may be hard to overcome on a short-term basis.

Given the description above of the group, the outputs in relation to research publications are very strong for such a small unit; the groups seem to have established a platform of international recognisable research with high scientific impact. The UoA describes three research teams with three distinct foci, but the staff overlaps within these three teams, so the size of the teams are not extremely small. All staff (except professors) and PhD students are under the leadership of the head of the division at the division of Activity and health which is also a support as allocation of research time is not independent of teaching time. This organisation seems to serve the UoA relatively well during the current leadership.

1.2 Are the main research areas appropriate for the unit and its development?

The research areas described are of high clinical relevance for health care, but potentially more on international than national level, as hand dysfunction and “paediatrics” in general are not major areas of the Swedish health care (or school) system as compared to many other countries in Europe and internationally. Similarly, the research is highly relevant for health care education, but to a relatively limited extent. There seem to be a development within the main areas and the teams as well to become more “overlapping” and generic, without compromising with its history and trajectory.

1.3 Please comment on the unit's reflective analysis of their environment.

Do the structures and processes create good conditions for high-quality research with regards to personnel, leadership, academic culture, national and international collaborations?

Overall, the self-report and interviews are aligned very well, and the UoA was highly aware of its strengths and limitations, which supported an engaged dialogue and discussion. There seem to be a high awareness of the need to create good conditions for the research (and the employees) with well described strategies for doctoral seminars (not only limited to PhD students, but also where junior and senior researchers participate on a regular basis), mentorship for junior researchers as well as for more senior researchers.

The size of the group is a vulnerability, especially as several of the senior faculty will retire now (or soon), which has already been highlighted. A strategic recruitment will therefore serve the team well (with a senior guest professor (recruited internationally) on a short-term basis) and one or two additional strategic associate senior lecturers (recruited internationally) announced with strategic profiles aligning with the UoA profile.

Suggested action points:

- More competitive associate senior lecturer funding opportunities on a faculty or university level to the unit in order to further strengthen the research teams. One or two positions (one potentially funded by the county council) would provide additional attractive recruitment positions for “brains and bodies” to ORU.
- Further development of shared funding with the county council could also be beneficial for the UoA, as a long-term collaboration already exists.
- Recruitment of an international guest professor – this could be combined with needs within education on advanced level, but primarily as a platform for the UoA research. Such recruitment may work even better post-covid with new routines for collaborations etc.

Separate PhD positions financed by ORU or the county council can be viewed as an additional asset, but should be aligned with the above action points in order to build a strong and sustainable research community within the UoA.

Please provide specific comments on the unit's research funding, publications and productivity.

Considering the relatively small pool of employees, the UoA demonstrates a strong research output and activity: during the evaluation period they have published 129 journal articles with a Web of Science coverage of 90.7 %, and in addition to this also 79 conference papers. The *h*-index of the 97 publications were 21, and 81.5 % of their citations during the period were amongst the 25 % top share publications (summarised). The major keywords used repeatedly in the 123 publications analysed are *children, reliability, cerebral palsy, health, and hand function*. When analysing the pattern of co-publications; no clear international collaboration partners appear in the list.

An important issue and weakness are the lack of funding (national and international) with very small amounts of funded projects over the years evaluated. The UoA does however have strong collaborations with the Örebro county council that have supported funding of PhD students for the research (not found in list but noted in the interviews).

The publication strategy seems to be more “organic” than systematically developed, but for whatever origin, it would be good for the UoA to reflect and plan even more strategically in order to maintain the publication output so far.

Suggested action points:

- Develop a publication strategy: Look into which studies that have gained strongest impact and why? How do you cite each other within the UoA? Can you systematise citations with other strong research units within the similar field?
- An external research application strategy for the upcoming three years could be developed. Successful funding is many times based on a strong track record. Who have this in the UoA? If not, who can be recruited? Which national, regional funders are best targeted to the research conducted by the UoA? What are the internal resources within ORU to support the UoA in this matter? A strategic plan for the UoA for external applications could here be helpful.
- Develop systematic international collaboration partners within this area of targeted research. This will also serve the PhD students with international experiences, as well as increasing international collaborations in publications.
- Note that the UoA have been successful in benefitting from internal competitive funding. These opportunities should also be maintained on the faculty and/or university level, as its relatively small investments have been used very productively by this UoA.

2. QUALITY OF THE RESEARCH

2.1 Credibility

Does the research environment produce creative and methodologically sound research of high quality? Please identify strengths and weaknesses.

The UoA produce creative and methodologically sound research of high quality, as indicated by the bibliometric data. The production is large given the relatively small amount of employees and a general lack of external funding. See a summary of strengths and weaknesses/action points below:

Strengths

- Well-functioning internal work environment a major asset within this UoA; as indicated by the self-evaluation.
- High level of peer-reviewed publications in high ranked journals with a high h-index overall, suggest that the international research community view the UoA as credible.

Areas for developments – concrete action points if possible

- Develop a clear publication strategy for the upcoming 5 years. This one should (in addition to earlier comments) also relate to issues of Open Access (OA) as well as Open Science (OS).
- New and suggested trajectories in research in the self-evaluation are relevant, logical and good as long as they are overall in line with the current research teams' trajectories. The development towards complex interventions is well aligned with the current research.
- The suggested new area of pedagogical research is more questionable, given the resources and competence available.

2.2 Contribution

Does the research make a contribution to the literature, the field and/or society? Please identify strengths and weaknesses.

Strengths

- The relative unique position nationally and internationally with a strong paediatric and clinical OT profile should be used even more strategically by the UoA.
- Strong asset to involve also non-research staff in the research as collaborators; strengthens both the educational impact of research and research-informed education.
- The link to the newly started Master program seem also to be a functional strategy for the UoA for a basis to recruit PhD students but also to support an even more research-informed education.

Areas for developments – concrete action points if possible

- The strong international scientific impact profile of the UoA Should be used as an asset even more strategically for ORU. Recruitment? International collaborations?
- Develop Impact Case/s. These are examples of how research have an impact outside of academia in order to have an effect on society, public policy or services, health, the environment or quality of life¹. There is a strong potential for the UoA to show the clinical impact in relation to e.g., changing practices in evaluating interventions for children with disabilities. Such examples can supplement more traditional research impact and can also be used for fundraising at ORU.
- Further develop and deepen the collaboration with the county council. Can consistent (or more long-term) funding for research be established?
- Develop more collaborations with other UoA at ORU of interests? Disability Research seem to be an unexplored collaboration partner here?

¹ See examples of Impact cases from UK at [REF Case study search](#)

2.3 Communicative

Is the research appropriately communicated to the scientific, professional and lay communities? Please identify strengths and weaknesses.

Strengths

- Overall good given the data provided. Above mentioned impact cases from the UoA could further communicate the clinical and societal impact of the UoA research.

Areas for developments – concrete action points if possible

- As above, a publication strategy and Impact case/s could further support the UoA.

2.4 Conforming

Are there sufficient routines for ensuring conformity with standards for ethics, sustainability and other regulations?

Strengths

- The UoA seems to have well-functioning routines (e.g., doctoral seminars) providing formative feedback and also monitoring that regulations are followed.
- Research is conducted with rigorous routines for ethical standards, many times in collaborations with the county council.
- Strong UoA especially in research ethics; employees already highly involved at ORU in such activities.

Areas for developments – concrete action points if possible

- Ensure that PhD students get experience of these regulations and take active part in these activities during their PhD work.

3. THE UNIT'S DEVELOPMENT PLAN

Please provide feedback as a critical friend. The focus should be on how the unit may best develop its research and enhance quality over the next 5-year period.

3.1 Observations and analysis

Please provide observations, reflections and analyses regarding the unit's development plan. You should include relevance of the plan (Is the plan realistic with a focus on an important and clear path forward? Are there sufficient resources and organisation for meeting the unit's goals?) and highlight strong areas that can be enhanced as well as areas in need of development.

The UoA development plan are self-reflective and in line with the interviews as well. The plan is realistic with defined actions. The action points given above can be seen as complementary rather than mandatory in this process. The importance of targeted strategic support from the school/faculty/university level is crucial within certain actions, whereas other actions are more self-regulated and can be conducted within resources given.

3.2 Recommendations

Please provide suggestions for what the unit should focus on and how improvements might best be realised.

Highlighted action points:

- More competitive **associate senior lecturer funding opportunities** on a faculty or university level to the unit in order to further strengthen the research teams.
- Further development of **shared long-term funding from the county council**.
- **Recruitment of an international guest professor**.
- Develop a **publication strategy**.
- Develop an **external research application strategy**.
- Develop **systematic international collaboration partners** within the UoA:s area of targeted research.
- Develop **new trajectories in research as long as they are overall in line and building upon the research teams' past trajectories**.
- Develop **UoA-specific Impact Case/s showing the clinical/social/societal impact** of the unit in e.g., changing clinical praxis.
- Further **developing collaborations also within ORU with other UoA:s**.

4. CONCLUDING REMARKS

Please summarise your review and provide a closing statement.

The UoA Occupational Therapy can face an overall impressive five-years back track record, despite the lack of consistent research funding, with a strong scientific and also a clinical/social/societal impact. The upcoming five years pose some major challenges for this UoA (due to staff retirement), but with some strategic support from faculty and/or University level, the UoA will continue to maintain and further develop its quality and impact on national and international levels.

Review team 8 experienced overall a lack of knowledge among the UoA:s in relation to (1) how internal funding for research was allocated and used within ORU, and (2) how academic career paths were organised within ORU. Transparency and knowledge in these matters among all UoA:s will further also develop the academic culture within ORU.

ORU2020 Review Report – Sport Science

Unit of Assessment: Sport Science

Review Team 8: Douglas Booth (main reviewer), Anders Kottorp, Karin Sonnander and Bjöörn Fossum

1. QUALITY OF THE RESEARCH ENVIRONMENT

1.1 Is the environment well organised to promote quality research?

Sport science covers the social and biological sciences, and is a practice-focused field with its origins in physical education. Researchers in sport science (UoA) emphasise the close relationship between teaching and research and the integration of theory and practice in physical education teacher training, coaching, sport management, sport physiology and sport medicine (including developing exercise rehabilitation programs and establishing guidelines for optimal physical activity and diet across the lifespan).

Sport science has grown over the last decade with an increase in professors (from 1 to 3) and PhD students (from 5 to 13) (Self-Assessment Document, SAD, 1.1, Notes from Meeting with Review Team); research outputs have accompanied this increase (e.g. from 26 articles in academic journals in 2013 to 55 in 2019). Growth has also meant a “tremendous expansion” in research interests (Self-Assessment Document, SAD, 1.3.1).

1.2 Are the main research areas appropriate for the unit and its development?

The UoA has structured its research around Research in Sport and Physical Activity (RISPA) and two research groups:

- Metabolism, Inflammation and Physical Activity (MIPA) which focuses on two areas: integrative physiology as applied to exercise and pathologies, and health impacts of physical activity and dietary habits.
- Research in Sport, Health and Physical Education (RESHAPE) which focuses on three areas: Health Promotion, Sport Management, and Physical Education and Health.

RISPA stems from reflection, discussion, negotiation and collaboration among researchers. Researchers have the freedom and autonomy to “pursue [their] own lines of research” (SAD, 1.3.2), and the head of subject actively encourages researchers to develop skills and expertise in their individual areas (SAD, 1.3.3) as a strategy to advance their careers, increase outputs, and generally enhance the profile of the unit.

1.3 Please comment on the unit's reflective analysis of their environment.

Do the structures and processes create good conditions for high-quality research with regards to personnel, leadership, academic culture, national and international collaborations?

Please provide specific comments on the unit's research funding, publications and productivity.

The Review Team holds the opinion that the structure is comprehensive and conducive to producing quality research; it is simultaneously forward looking and responsive to changing and emerging conditions. The Review Team acknowledges the structural conundrum facing sport science which "sits within the Faculty of Medicine and Health" and where "a large part" of the research is "outside the main activities of the School and the Faculty" (SAD, 1.3.2). The Review Team encourages full and frank discussions regarding the location of sport science within the School of Health and whether the institutional alignment of sport science with health and medicine is the best model.

2. QUALITY OF THE RESEARCH

2.1 Credibility

Does the research environment produce creative and methodologically sound research of high quality? Please identify strengths and weaknesses.

Under the current structure, some researchers in the UoA feel unfairly assessed/evaluated/subjected to what they deem is a one-size-fits-all set of policies/protocols/approaches adopted by the medical sciences (Notes from Meeting with Review Team). The research methodologies of sport science, especially its multidisciplinary and social science components, are often incompatible with those in medical science.

2.2 Contribution

Does the research make a contribution to the literature, the field and/or society? Please identify strengths and weaknesses.

The Review Team emphasises the long-term trend toward multidisciplinary research and encourages the leaders in the Schools of Medical and Health Sciences to work together to advance their respective attributes and strengths in medicine, health science and sport science.

Strong leadership, enthusiastic and active researchers, a vibrant academic culture and the overarching RISPA structure, have collectively laid solid foundations for high-quality research. These foundations appear to be enhanced by good networks and collaborations across the UoA, Faculty and University, and with national and international colleagues. The Review Team noted "the ambition to work collectively" within RESHAPE (SAD, 1.3.3), with researchers sharing drafts of articles, chapters and grant applications for comment and feedback. Such collective enterprise is evidence of a high trust environment and points to a strong academic culture in sport science that is particularly beneficial for early career researchers.

2.3 Communicative

Is the research appropriately communicated to the scientific, professional and lay communities? Please identify strengths and weaknesses.

Researchers in MIPA reported some strong relationships with colleagues in medicine, for example, around exercise rehabilitation and exercise therapies for diabetics and muscular diseases. Researchers working in RESHAPE reported healthy collaborations with colleagues in education and the humanities. Scholarly relationships and collaborations forged in sport science typically follow, or are linked to, specific projects and draw on the expertise and skills of individuals as required. In sport science, relationships/collaborations include those between biological scientists and social scientists such as in research into successful aging and physical activity among the elderly. Critically, researchers are aware of, acknowledge, and recruit “experts” from across the university to collaborate with and support specific research projects.

2.4 Conforming

Are there sufficient routines for ensuring conformity with standards for ethics, sustainability and other regulations?

Researchers reported what they described as “small” collaborations” with “many different [national and international] partners” (SAD, 1.3.4). These collaborations primarily emerge from connections established by individuals through conferences and institutional, disciplinary and professional links. The Review Team is of the view that these forms of ‘organic’ links are frequently stronger and more productive than pan-institutional links forged by memoranda of understanding between universities. Nonetheless, the Review Team agrees that institutional links at the unit level, especially within Sweden and Europe, could benefit sport science.

3. THE UNIT’S DEVELOPMENT PLAN

Please provide feedback as a critical friend. The focus should be on how the unit may best develop its research and enhance quality over the next 5-year period.

3.1 Observations and analysis

Please provide observations, reflections and analyses regarding the unit’s development plan. You should include relevance of the plan (Is the plan realistic with a focus on an important and clear path forward? Are there sufficient resources and organisation for meeting the unit’s goals?) and highlight strong areas that can be enhanced as well as areas in need of development.

The Review Team encourages the Faculty and Örebro University to develop a sabbatical policy that provides for periods of longer-term (6-12 months) research at different institutions. The Review Team identifies sabbatical leave as an effective means to rejuvenate and motivate researchers. A sabbatical leave policy should include provisions that ensure the teaching responsibilities of researchers are met during their absence.

The Review Team encourages the UoA to develop a policy for hosting international guests, especially graduate students and researchers from institutions who have identified specific researchers at Örebro with whom they wish to work / collaborate. Many guests are self-funded and require only

space, access to printing, internet and the library. An international guest policy should include provisions that establish clear outcomes from any visit and identify the responsibilities of the host UoA. In addition, the Review Team suggests that Örebro University create a fund to enable distinguished scholars to spend extended periods of time (up to one year) at Örebro. Under the provisions of such a fund, research units could apply to invite a scholar of their choosing.

External funding in sport science typically makes up between 10-30 percent of total funding to the UoA. In 2019, sport science secured over 50 percent of external research funds won by the School of Health Sciences. Most funding for research in sport science derives from the central university and the School of Health Sciences which allocate funds on an annual (occasionally biennial) basis. The Review Team believes that the unit would benefit from the security of some longer term funding (three to five years). In this regard, the Review Team recommends that there be greater devolution of funding to the UoA—where the research is conducted.

As noted above, there has been a strong increase in the quantity of research outputs in sport science over the past five years. The increase in quantity has been matched by quality; a good percentage of articles appear in Q1 and Q2 journals (SAD, 1.3.6; Bibliometric Analyses, Figs 8 and 9). The increase in quantity has also been accompanied by an increase in citations from 260 in 2013 to 1244 in 2018 (Bibliometric Analyses, Table 15 [numbers exclude self-citations]). The increase in raw citations is impressive and well supported by maps of keywords that highlight the broad research themes undertaken by sports scientists at Örebro University (Bibliometric Analyses, Figs 17-19). However, it would be interesting to know whether all disciplinary areas in sport science are contributing to the increase in citations. Scholars working in physiology, psychology and pedagogy typically have higher citation counts than those working in sport history or biomechanics.

According to the SAD (1.3.6), the Faculty of Medicine and Health does not recognise conference papers and thus there is no incentive for the researchers in the UoA to report them in the University depository (DiVA). While members of the Review Team do not disagree with this position, we are also of the opinion that conferences—and by extension conference papers—are important venues for networking and recruiting graduate students, and that fully-funded keynote presentations are good measures of peer esteem.

Beyond grant applications and published outputs, researchers in sport science are serving professional groups and colleagues as editors and reviewers of journals, guest editors of special editions of journals, visiting professors at other institutions, examiners and discussants of PhD theses, and supervisors of PhD students at other universities (inside and outside of Sweden) (SAD, 2.1). This service reflects the credibility of sport science and contributes to the profile of Örebro University.

In advancing and developing research in sport science, the Review Team learned of uncertainties associated with the recruitment and funding of PhD students (SAD, 1.3.5). Sport science effectively relies on the Faculty of Medicine and Health (and in a few cases the University) to fund PhD students with external agencies offering limited resources/opportunities. This is an impending issue in sport science: six of the current 12 PhD students are due to complete their theses by the end of 2021. The UoA is uncertain as to whether the School of Health will allocate fresh funding to support a new intake of PhD students. The issue is compounded by a shortage of funding opportunities for the full four years of PhD studies as mandated in the Swedish system (SAD, 3.3). The EU typically restricts

funding to three years and the Review Team is of the view that Örebro University should resolve this discrepancy by funding the mandatory fourth year of the PhD programme.

The Review Team heard concerns from researchers that “heavy teaching loads” and “administrative and leadership tasks” (SAD, 1.4) are obstacles to the development of research in sport science. The Review Team considers that 70 percent teaching loads are excessive in comparison to those at research universities elsewhere in Europe, Australia and North America. The Review Team is also of the view that time officially allocated to professors for research should not be encumbered by broader administrative tasks.

Some service performed in sport science (see page 3 above) can be characterised as so-called third tasks which, along with related work such as podcasting, blogging, communicating with the public and offering research service to community and sports organisations and schools, is critical to the success of the UoA. The Review Team heard that this work is not specifically identified in tenure and promotion documents at Örebro University; the Review Team is of the view that this is an omission that the University should rectify.

3.2 Recommendations

Please provide suggestions for what the unit should focus on and how improvements might best be realised.

To Sport Science:

- Expand institutional links with other sport science and related research units in Sweden and Europe.
- Develop a policy for hosting international guests.
- Analyse bibliometrics to identify which disciplinary areas in sport science are contributing to the increase in citations.

To the Dean of the Faculty of Medicine and Health:

- Lead frank discussions with sport science to assess whether this unit is best positioned within a medical-health structure and or context.
- Ensure greater devolution of research funds to sport science.
- Establish a three to five year funding model that allocates some secure longer term funding to research units.
- Provide financial certainty as to the future of funding of PhD students in sport science.

To Örebro University:

- Develop a sabbatical policy that provides for longer periods (6-12 months) of research at different institutions.
- Create a fund to enable distinguished scholars to spend extended periods of time (up to one year) at Örebro.
- Provide research units with funds to cover the mandatory fourth year of PhD programmes.
- Examine ways to reduce the 70 percent teaching load which is an impediment to research especially among emerging scholars.
- Examine ways to reduce administrative tasks allocated to professors who, under the current workload model, undertake these tasks in official research time.
- Identify, acknowledge and incorporate essential third tasks into tenure and promotion documents.



4. CONCLUDING REMARKS

Please summarise your review and provide a closing statement.

Researchers in sport science have a comprehensive framework and conceptualisation of research. This structure is forward looking, responsive to changing and emerging conditions, and conducive to producing quality outputs. Researchers in the UoA have forged a strong academic culture based on a high trust environment. Financial and moral support from the Schools of Medicine and Health Sciences and Örebro University will ensure that sport science continues to develop and prosper over the next reporting period.

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