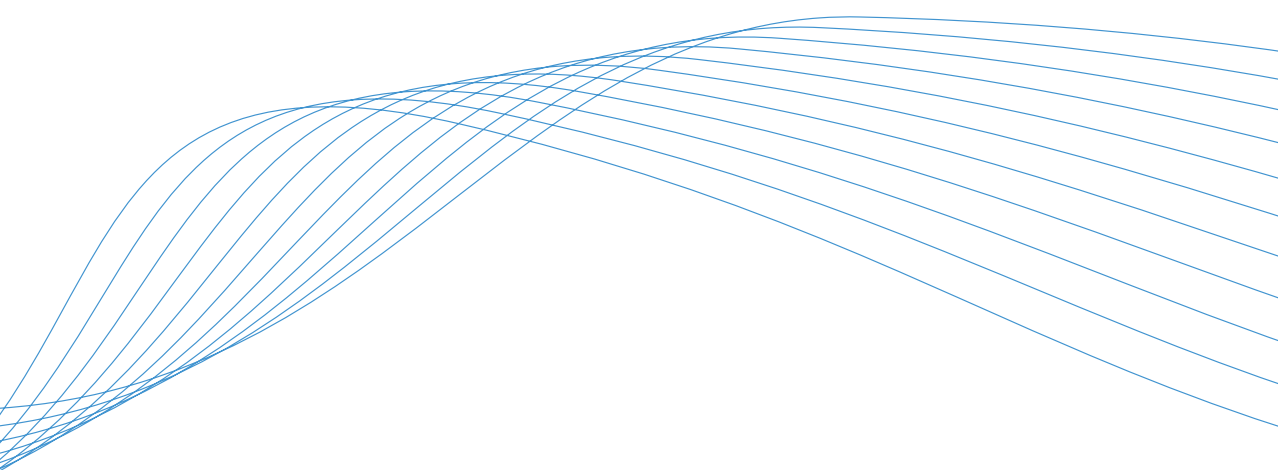


ORU2015

Örebro University Research Evaluation 2015

Evaluation Report



ÖREBRO
UNIVERSITY

ORU2015



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Örebro University Research Evaluation 2015
Evaluation Report

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ORU2015

Foreword

How do we know if our research is of a high standard and what exactly is a high standard of research? There may be a number of possible answers to both questions, but one thing is certain – we need to know what research is being conducted at Örebro University. We also need to know if, where, and when our research is published and made available to the public and to society. Furthermore, we need to know which impact it has.

If we do not have the confidence to approach these issues, there is a risk that we find ourselves surrounded with various opinions and false notions about our research without just cause. Moreover, asking these questions will enable us to allocate available research funds in the best possible way, while reinforcing our commitment to stimulating fresh ideas and investment into research that will bring benefits to society.

For these reasons, we are now undertaking our second comprehensive research evaluation, ORU2015, at Örebro University and Örebro University Hospital. The previous evaluation, ÖRE2010, led to a redistribution of funding and a new strategic approach to the allocation of research funds, with a stronger focus on more strategic investments.

Now that the results of ORU2015 are in, new strategic considerations will be required. We know that ÖRE2010 had a positive effect on the university's course of development. We are also aware that we need to take responsibility for accomplishing a higher degree of fairness across disciplines in terms of research conditions. ORU2015 makes for an exciting read, calling for further discussion and thoughts on the future direction for Örebro University.

Jens Schollin
Vice-Chancellor
Örebro University

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Preface

In December 2014, Vice-Chancellor Professor Jens Schollin initiated the second evaluation of the research conducted within all faculties at Örebro University. This evaluation – ORU2015 – is aimed at constituting a basis for future key strategic decisions concerning research at the university.

A steering group, led by Pro-Vice-Chancellor Gunilla Lindström and with representation of Deans Anna-Karin Andershed, Robert Brummer, and Åke Strid, and the University Hospital Head of Research, Mats Karlsson, was appointed to propose the assessment model to be used. A project group including the members of the initial steering group and several working groups, encompassing administrative and technical support during the project, has brought the ORU2015 evaluation to a successful close.

ORU2015 was carried out in three consecutive steps. Eight units of evaluation, including 38 subunits, were agreed on and the first step was a bibliometric assessment of research performance by each unit. The second step included gathering information on each subunit: its research, the academic staff, and the financial and infrastructural resources. All the above information was retrieved from external and internal research information systems. The researchers and units of evaluation had been requested to update all relevant information beforehand. With the bibliometric assessment and updated information at hand in June the assessment units then performed their self-evaluations.

The last step of ORU2015 was a meta-analytical panel assessment of the research as presented in the bibliometrics and in the material collected during the second step of the evaluation. The panel assessment was carried out by an external multidisciplinary panel in September and October. The 14 panellists represented medical and health sciences, humanities and social sciences, and technology and natural sciences. The two-day panel meeting, chaired by Professor Dan Brändström, took place at Örebro University in October 2015.

ORU2015 is the second comprehensive research evaluation carried out at Örebro University. In 2010 the university's research was assessed in ÖRE2010. It helped us identify the most impactful strategic investments to build on our research success. It led to investments to support young researchers, doctoral students and successful senior researchers. The investments also funded a strategic programme for new research fellows to become future research leaders at the university.

It was clear from ÖRE2010, as is it now from ORU2015, that there are both strong and weak areas of research within each faculty. Whilst research quality, capacity and reputation has grown at our university, there is great potential to do more, and a great willingness to develop our research in quantity as well as in quality. Future decisions concerning research at large, as well as in specific areas, will be well underpinned by ORU2015. Since the medical and health sciences at the University Hospital have also been assessed in ORU2015, the evaluation will hopefully serve its purpose for the research conducted there.

It is of course not possible to carry out a research evaluation like ORU2015 without the support and enthusiasm of all researchers, research administrators, the library, IT Services, the Finance Office, and the heads of schools or deans of faculties. I would like to express my sincere gratitude to everyone who has contributed to the 'project'.

Örebro in December 2015

Gunilla Lindström
Chair of ORU2015

ORU2015 – Executive Summary

During 2015, all research performed from 2008 to 2014 at Örebro University, as well as research at Örebro University Hospital, has been evaluated. This report – ORU2015 – presents the background, planning and implementation of the research assessment and its results. Chapter I includes the panel evaluations, and chapter II presents the bibliometric data.

Of the 38 subunits of evaluation, 8 are within the Faculty of Business, Science and Engineering, 17 are within the Faculty of Humanities and Social Sciences, 7 within the Faculty of Medicine and Health, and 6 at Region Örebro County's University Hospital. The evaluation had a meta-analytical approach (see Annex A), and the external multidisciplinary panel assessed the research in each subunit of evaluation (see Annex B).

The panel's evaluation material consisted of a research overview, documentation on academic staff and competence, as well as on funding, self-evaluations and bibliometric data. The self-evaluations by each subunit addressed (i) scientific quality and scientific impact, (ii) impact and outreach, (iii) internationalisation, and (iv) research – education interaction. Each overarching evaluation unit was also assessed, including a SWOT analysis, by the respective heads of schools and deans. Apart from the self-evaluations, the material was retrieved from the university databases, Web of Science and Academic Archive Online (DiVA). The subunits had the opportunity to update their research information for the research overview prior to making the material available to the panel. The fourteen panellists, representing economics, natural sciences and technology, humanities, social sciences, medicine and health sciences, met for two days in October at Örebro University for the evaluation discussions. The agreed evaluation statements were delivered shortly thereafter.

The great variability in the subunits' scientific practices, scale, and establishment had to be accounted for in the panel evaluations. The evaluation subunits range from very large (up to 60 researchers), to medium sized (about 20 researchers), and to quite small subunits (fewer than nine researchers). The points of reference for the panel's statements were the (i) quality of research, (ii) research environment and infrastructure, (iii) scientific and social interaction and (iv) future potential. Gradings ranged between *Excellent* (5) and *Insufficient* (1). The key data in the bibliometric assessment was scientific impact, vitality, productivity and international visibility, as indicated by the publications of each subunit. It can be seen from the panel statement of a subunit and the matching bibliometric data that these two assessments correspond to a large extent, but not completely.

It is concluded from the panel evaluation that there are *Excellent* (5), *Very Good* (4), *Good* (3), *Sufficient* (2), as well as *Insufficient* (1) subunits at the university. A majority of the fourteen subunits that performed well (grade 3 – 5) are medium-sized, whilst the majority of the sixteen weakly performing subunits (grade 1 – 2) are small in size. Of course, for the humanities and social sciences, the Web of Science data only contains output to a limited degree. Therefore data from DiVA has been used and compared as well. For some subunits this makes a difference, but of the 16 subunits that show a weak performance according to Web of Science data, ten also perform weakly as shown in DiVA. Only three of these subunits score *Good* and one *Very Good* in DiVA.

It can be seen from ORU2015 that the research volume, especially expressed in scientific publications per year and citations, has roughly doubled since ÖRE2010. In 2014, the total number of publications in Web of Science by researchers at the university and the university hospital reached some 600 and the number of citations were 14,000 the same year. The 'findings' of ORU2015 provide an important basis for decisions by leaders at all levels of the university in terms of strategic planning, support, and development of the research for the future.

Introduction to Örebro University and Its Research

Örebro University and Internal Governance

Örebro University (ORU) is a young university. It was awarded university status in 1999 and since then the university represents a continuous development of high-quality and highly regarded academic degree programmes and research. In its first research assessment, ÖRE2010, the university already showed its national research competitiveness. Today ORU is one of the largest of a handful of ‘young’ universities in Sweden. Recently the gap between ORU and earlier established ‘old’ universities in Sweden has tapered off. ORU now ranks 10th or 11th in all national evaluations and rankings and 334th in the Times Higher Education World University Ranking 2015 – 2016.

In terms of internal governance, ORU is led by a University Board (see Figure 1) with eight external members, along with three teacher and three student representatives. The Vice-Chancellor Professor Jens Schollin, is also a member of the Board. The Board is chaired by former state secretary, Hans Sandebring. Reporting to the Vice-Chancellor are three faculty boards, each headed by a dean. The deans and the faculty board are responsible for the quality of research and education within the faculty.

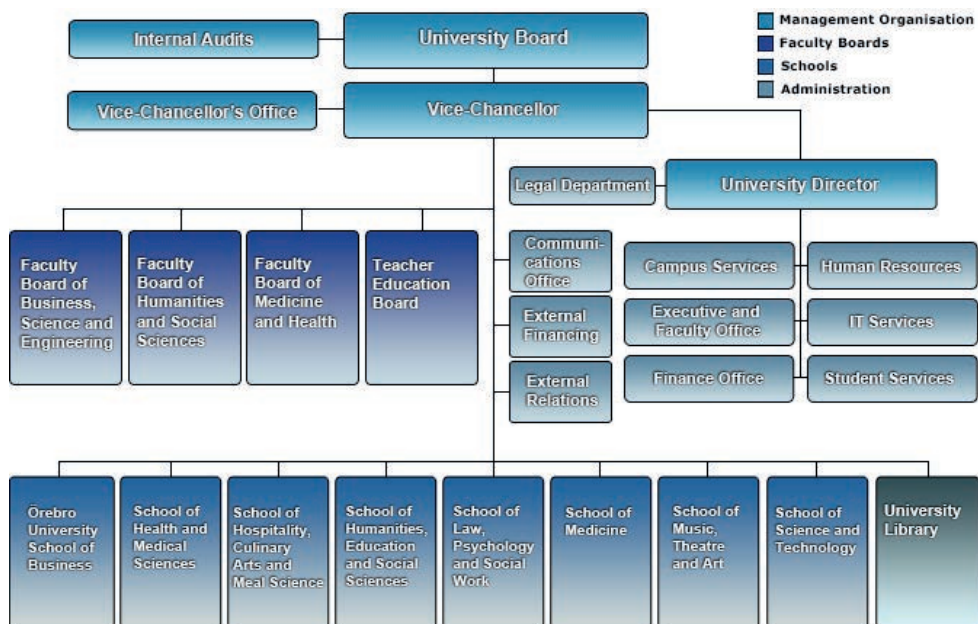


Figure 1: Organisation overview of Örebro University

In the current research evaluation, ORU2015, the three deans, Professor Anna-Karin Andershed, Faculty of Humanities and Social Sciences, Professor Robert Brummer, Faculty of Medicine and Health, and Professor Åke Strid, Faculty of Business, Science and Engineering, have been active members of the ORU2015 steering and project groups. The University Director Louise Pålsson, in charge of the administrative support services, has been a member of these groups as well. The eight schools have been represented in ORU2015 by the heads of schools.

Research at Örebro University

In its Vision 2016, ORU states a clear goal for its research, with a number of appropriate strategies.

It is our goal to pursue free and creative research that caters to different needs, while striving for an approach that looks across and behind boundaries. We are a university that attracts prominent researchers and forms partnerships that enhance the quality of our research.

We intend to

- review the quality of our research through increased international scientific publication
- develop our international research collaborations
- stimulate initiatives for a substantial increase of our external research funding
- promote such research activities, research findings, and artistic research and development that contribute to the university achieving its overall goals.

The quality of research at ORU is a key factor for successful national and international collaboration. Thus, research competence at the university is of paramount importance. At ORU, research environments are expected to have a clear international dimension and be visibly participating in the global scientific arena.

Each year, the university generates around 600 international scientific publications. The scale of their impact is comparable to that of universities established during the 1960s and '70s. The previous external research evaluation, ÖRE2010, which included all research at ORU between the years of 2000 to 2008, gave rise to and supported a number of subsequent strategic research initiatives. The allocation of resources was directed to five identified strong research environments, ten outstanding senior researchers and ten promising young researchers. In addition to this, 20 PhD students were appointed. The outcome of this strategic well-informed venture is visible in the current research assessment ORU2015.

Academic Focus within the Three Faculties

Faculty of Business, Science and Engineering. This faculty is organised in two schools: The School of Business and the School of Science and Technology. Teaching at the former is carried out in a number of fields, such as business administration, economics, statistics, and informatics, and at the latter in mathematics, physics, chemistry, biology, environmental science, mechanical engineering, computer science, and civil engineering. Teaching is primarily focused on professional programmes in engineering, computer science, informatics, and business administration. There are Bachelor's programmes in chemistry, mathematics and business administration and Master's programmes in chemistry, economics, statistics, and business administration. Interaction with the private sector is strong, especially in business administration, informatics, computer science and engineering. Faculty-supported research is carried out in economics, chemistry, biology, computer science, business administration, informatics, and civil engineering.

Faculty of Humanities and Social Sciences. Research and education in humanities and social sciences are organised in four schools: School of Hospitality, Culinary Arts and Meal Science; School of Humanities, Education and Social Sciences; School of Law, Psychology and Social Work; and School of Music, Theatre and Art. These schools include 18 disciplines, ranging from musicology, through history, languages, human geography, and political science, to law, social work, and culinary arts and meal science. Strong professional programmes reside in each school, for example clinical psychology, law programme, teacher training, public administration and management, culinary arts and meal science (chef), and a Bachelor's programme in musical interpretation. Faculty-supported research is carried out in the majority of disciplines, including

criminology, gender science, media and communication sciences, and psychology, as well as in education, rhetoric, and sociology.

Faculty of Medicine and Health. The faculty comprises two schools: School of Health and Medical Sciences, and the School of Medicine. These schools cover teaching and research areas such as medicine, biomedicine, nursing and caring sciences, occupational health, and sports sciences. The main focus is on professional programmes and related clinical sciences. There is strong collaboration with Örebro University Hospital and other health care providers in the region. Research has currently been organised in interdisciplinary research environments, characterised by a core research topic. Faculty-supported research is mainly carried out in well-defined interdisciplinary research environments that include the traditional disciplines biomedicine, medicine and health sciences.

Financial Description of Örebro University

Örebro University benefits from a stable and secure financial position (see Table 1). For the past six years ORU has reported a surplus, which has allowed for a relatively large buffer of agency capital to be built up. This financial stability provides an opportunity to implement and invest in institutional strategies.

Table 1: Revenues, Costs and Outcome for the Fiscal Years of 2012-2014 (MSEK).

	Revenues			Costs			Outcome		
	2014	2013	2012	2014	2013	2012	2014	2013	2012
Education	757,6	717,5	715,6	737,4	705,8	675,6	20,2	11,7	40,0
Research	381,8	363,8	359,0	365,5	350,1	340,6	16,3	13,7	18,4
Total	1 139,4	1 081,3	1 074,6	1 102,9	1 055,9	1 016,2	36,5	25,4	58,4

The turnover is SEK 1,139 million. Income from education accounts for 66 per cent (including grants fees and other charges), whilst 34 per cent comes from research (including government and external grants, fees and other charges) – proportions which have remained consistent for the last three years (see Figure 2). The majority of our funding comes from government grants, which account for approximately 80 per cent of our total revenues – of these, 60 per cent supports education and 20 per cent research. The remaining 20 per cent consists largely of income from research councils, the EU, government agencies and private sources. Staffing costs amounts to 64 per cent of the ORU total expenditure, whilst premises account for 16 per cent, with the remaining comprised of additional operational costs and depreciation (see Figure 3 and Annex C).

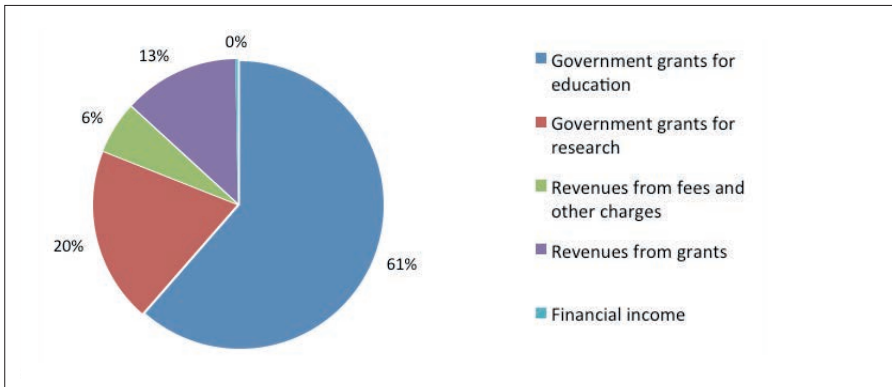


Figure 2: Sources of Income for the Fiscal Year of 2014.

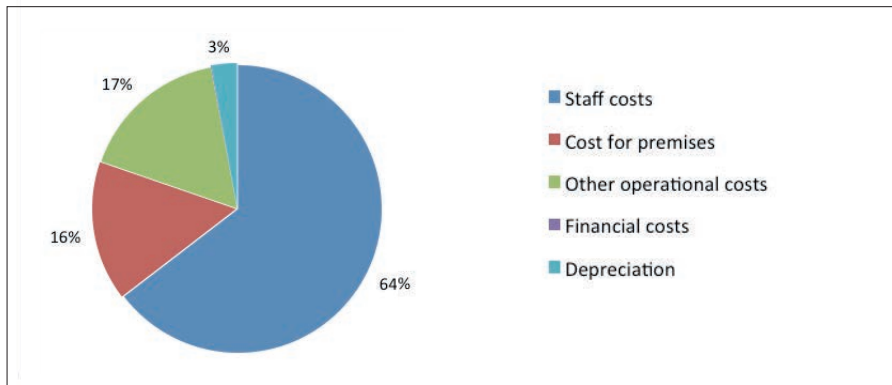


Figure 3: Distribution of Costs for the Fiscal Year of 2014.

The agency capital of ORU amounts to SEK 436 million as of the end of 2014. Twenty-one per cent of this is allocated to research purposes, and 79 per cent allocated to education. This provides an opportunity for us to continue making strategic and sustainable investments, such as those linked to our international collaborations.

Gunilla Lindström
Chair of ORU2015

Chapter I: The Panel Evaluations

The Research Evaluation ORU2015 – The Panel’s Perspective

The primary aim of the research evaluation at Örebro University, ORU2015, has been to assess the status and the current potential of the research at Örebro University as well as to create a basis for future strategic research policy within the university.

A Meta-Analytical Approach

The method of evaluation chosen by the ORU2015 steering group and carried out by the project group and several working groups, has been a meta-analytical approach. A bibliometric assessment of the research within the 38 subunits of evaluation served as an important starting point. For the purpose of a self-evaluation, the subunits received the bibliometric assessments, descriptions of their research, their academic staff, internal and external funding (see Annex D for an overview of parameters and indicators). The final evaluation material, encompassing some 600 pages, was then delivered to the multidisciplinary panel for their analysis.

Material for the evaluation

Part I: Bibliometric report (Bibliometric analysis of ORU research 2008 – 2014)

Part IIa: ORU Database Information (research, competence and resources)

Part IIb: Self-evaluations (by the eight units and 38 subunits)

Overall Task for the Panel

The overall task for the panel has been to provide thoughts and conclusions on the status of research at Örebro University. The work was entirely based on the evaluation material provided above and excluded field interviews with the subunits. The task of the panel was to evaluate the research performance of the subunits and faculty of ORU in the following four areas:

- i. Quality of research
- ii. Research environment and infrastructure
- iii. Scientific and social interaction
- iv. Future potential

In addition, the panel was charged with the task of providing a summary statement for each evaluated subunit as well as giving recommendations.

Specific Tasks for the Panellists

Before the panel meeting, the panellists were asked to read, learn about, and comment on the research in all three faculties. The material for evaluation was distributed one month before the meeting to the panellists with instructions from the chairman, Professor Dan Brändström. Each panellist was assigned the task of working as *rapporteur 1* or *2* for a number of evaluation subunits, which were closer to their areas of expertise (see Annex B). Before the meeting, the panel was provided with a short *draft statement* (in line with the given instructions and with the suggested evaluations grade) from each rapporteur. The panel member Professor *Peter van den Besselaar* had been asked to provide a brief translation of all the bibliometric data into evaluation scores (see Annex E), which was presented to the panel at the start of the meeting.

The Bibliometric Report

The panel benefited greatly from the bibliometric work by Professor *Ulf Sandström* (part I of the evaluation material). The main benefits from using bibliometric material are that it is considered to be largely comparable across the evaluated subunits, that the information used for deriving scaled grades is the same for each evaluated subunit, and that it is accurate, objective

and reproducible. The panel made their evaluation and grading mainly on the basis of the bibliometric information. If additional material had been provided and the self-evaluations (which were not always very informative) had been more analytical, this could have been considered and included in a more systematic manner.

The panel, however, is fully aware that there are systematic limitations of the bibliometric information. These limitations are mostly of the following two kinds:

(A) The bibliometric report is based on the Web of Science. This database covers between 8.59 % (arts and humanities) and 42.72 % (natural sciences and engineering) of all scholarly journals and outlets.¹ In addition, it has only recently begun to cover books (both authored and edited) and conference proceedings. This part is, therefore, not as functional as the part that covers journal publications, especially in disciplines that have a monograph tradition.

Other databases cover higher percentages of the scholarly journals. This applies in particular to Scopus, which covers about twice as many scholarly journals. However, there are more known errors in the Scopus database than in the Web of Science database. Biases, e.g. the heavy focus on English-language outlets, are about the same in Web of Science and in Scopus. A third group of databases, most notably Google Scholar, usually comes to far more optimistic ratings of citation records. To arrive at these ratings, Google Scholar scouts the Internet and counts a work as cited whenever it is listed in a course syllabus that is placed on the Internet, thus overestimating citation records greatly. For these reasons, the panel thinks that the choice of the Web of Science database was the best option, in spite of its limitations.

(B) Citation records and network node analysis, as the Web of Science provides them, are of different importance in various disciplines. In most disciplines, citations of journal articles and the quality or ranking of journals are of utmost importance. In contrast, in disciplines such as law, informatics and computer science, citations are either of minor importance or are based on materials not covered in the Web of Science database. In particular, this applies to conference proceedings – prominent in computer science – which are only partly covered. This information included, but was not limited to, personal expertise in the disciplines for which the Web of Science database is of minor use, personal knowledge of the individuals included in the ratings, and web searches that were conducted with the goal of maximising the amount of information on which grades could be based. By implication, this procedure reduces comparability across evaluation subunits, but increases the validity of the grades. The panel opted for increasing the validity of the grades.

Database Information and Self-Evaluations

The panel also discussed and reflected upon the ORU database documentation and the self-evaluations (Parts IIa and IIb), both at the beginning of the meeting and during the process. Besides questions concerning the internal organisation of the university, there were a number of issues that the panel could not understand based upon information in the provided documents. Furthermore, the panel reflected upon the method of evaluation – the bibliometric analysis and grading. In the next sections the conditions of the evaluation are discussed further.

The Panel Discussion

After a presentation of the working procedures, an opportunity was given for the deans to present the structure of research organisation within their faculties and to answer questions raised by the members of the panel. The evaluation material in itself contained limited information concerning the overall organisation of Örebro University and the relations between the vice-chancellor, deans, and heads of schools. The information on relations between faculties,

¹ Mongeon, P. & Paul-Hus, A. (2014). The journal coverage of bibliometric databases: A comparison of Scopus and Web of Science. Retrieved on 10/25/2014 from <http://www.asis.org/SIG/SIGMET/data/uploads/sigmat2014/mongeon.pdf>

schools, disciplinary subject, cross-disciplinary research environments, research centres, and research groups was also vague. The interviews conducted with the deans and the head of the Business School during the meeting were considered valuable to understand the organisation. A lot of issues were then clarified, thanks to these presentations.

Many comments were given during the discussions and reflections concerning the evaluation method, such as hesitations of using Web of Science at all in certain areas e.g. humanities and social sciences with statements such as “to compare medicine with the humanities is like comparing apples and pears” and “the data is not the same in DiVA² as in Web of Science”. The subunits are many times too small – even to be graded. For this particular reason, the panel gave no marks at all to two subunits – Rhetoric and Communication, Culture and Diversity.

On the other hand, the bibliometric data could be productively used in many cases. It provided information of the relative standing of a subunit compared to the overall Swedish performance in the field of the subunit – so comparisons were made between similar kinds of units. The validity of the bibliometric data was also underlined by the data from DiVA. Despite that the latter data was collected in a very different way, the Web of Science scores and the DiVA scores often pointed in the same direction. Overall, the bibliometric data provided a frame of reference for the panel discussions. The data served to moderate discussions when these were becoming much more positive or negative than the Web of Science and DiVA scores. In those cases, the panel discussed what information might justify such deviations.

The benchmark for discussions and grading was the bibliometric data and analyses as provided by the university. The rapporteurs for each subunit commenced the evaluation discussion by presenting their draft statements. After that, all panellists were invited to give their comments. The chairman closed the discussion when an agreement on the grade was reached by all the panellists.

Organisation

It was not easy for the panel to understand the actual administrative structures at Örebro University. What are the strategic roles and missions for the various actors in the local system: the disciplinary-based schools, the research environments, the centres, and the research groups? It was in some cases difficult to understand what the administrative role of the subunit was and consequently challenging for the panel to give proper advice on the future strategic planning. The panel also understood that strategic advice was not part of the task. As stated earlier, it was of value that presentations from different parts of the organisation were included in the programme. Thus, the panel had a chance to have some issues clarified before the evaluation of the subunits started.

Self-Evaluations

The self-evaluations of the different subunits were not always according to the instructions. It was questioned whether the instructions had been sufficiently clear and if the self-evaluations had been approved by the deans. Now they comprised different types of descriptions, varying between different environments: a) descriptions of activities in terms of status quo and past performance; b) a self-reflecting evaluation of current and past performance; c) presentations of plans for the future, expectations and ambitions. All these elements are of course very important in a self-evaluation, but they cannot replace each other. There are substantial differences between the descriptions of the work by the various research environments and groups that formed the subunits of evaluation.

Research Activity

A list of the active researchers in each of the research groups would, of course, have been extremely useful. The data on annual research activity time provided for each faculty member

² DiVA: Digitala Vetenskapliga Arkivet; *Academic Archive Online*

may not provide a complete picture. There also seems to be some lack of consistency on how the doctoral students are reported on in the material. It would have been of great value and service to the panel if a complete alphabetical register had been provided (not only abbreviations as provided in the bibliometric report; see Annex F), in order to help to find persons in the organisation. It would have been valuable if each subunit had given the titles of their main publications as this would have been useful information for the panel regarding the specific content and focus of the research activities. Another shortcoming was the lack of clear description of the scientific achievements in other than meta-analytical terms and also how the financial resources for research were divided between internal and external funds within the subunits.

During the process the panel received information that Örebro University had no single and unified system for registration of external funding, whether from research funders or through collaboration with industry. However, information about actual grants from the external sources should have been given.

Many panellists found it crucial that information on docentships was missing: Docents (associate professors) were not mentioned in the evaluation material presented, neither in terms of having the title nor as regards the year of appointment. The timing of recruitment of faculty members – not just the year of their PhD award – would also have served as useful background information. Overall the missing information on individual faculty members and their research output in the self-evaluation meant that the assessment primarily had to rely on the bibliometric evaluation of the subunit.

A special task was given to Professor Kenneth Nordgren to assess the didactic research within education and teaching in addition to bibliometric notes (see Annex G). Because of insufficient data, this evaluation could not be part of any qualified grading. Nevertheless, the panel found it extremely valuable for the university to study the recommendations made by the panel since the field is relatively underdeveloped on a national level and there is quite a large educational subunit with a strong tradition to build upon at Örebro University.

The Grading System

The panel noted that the grading system chosen by the university did not correspond to commonly used international grading systems, and for some grades there were no quality indicators. For example, grade 3 indicated “good publication volume”, but there was no mention of good quality. The panel also emphasised in the discussions that grade 2 was “sufficient”, i.e. adequate, and did not mean “not approved”!

Several of the panellists found it difficult to provide comparative judgments, comparisons and grading between various subunits. The bibliometric measures had to be used differently for the different disciplines. There is an inherent danger in having one hard measure for all. However, this should not be overstated as the bibliometric data (Web of Science as well as DiVA scores) is normalised by field, and comparisons are made within a Swedish context: Top 10 % indicates that a subunit is in the top 10 % of Swedish research in that field.

Leadership

One of the aspects to be evaluated was *organisation and leadership*. The lack of information about the former has already been noted, but the lack of information about leadership at any level made it impossible to give any specific comments or advice on this crucial point.

Nevertheless, the panel made some general comments on the fact that many subunits had too many rather small projects and too few larger programmes. Consequently, in these subunits it will be very difficult for the leadership to make relevant quality assessment of current research or to make choices about the direction of research. It remained unclear whether the

development of research within the university is driven by strategic planning or is the result of many individual initiatives.

One piece of advice given by the panel is to search for possibilities of having some of the environments/groups/centres integrated with others or even merged. In many subunits there are professors who are approaching their retirement. This could also create an opportunity to renew research leadership by appointing productive and internationally oriented younger professors. Recruitment strategies in connection with retirements ought to be implemented in the near future in order to establish and develop a well-functioning and comprehensive research policy at the university.

Region Örebro County / Region Örebro län

In addition to the research based at the Faculty of Medicine and Health, the panel was also offered bibliometric analysis of five subunits within Örebro University Hospital (Region Örebro län, RÖL). The five RÖL subunits – Biomedicine, Medicine, Surgery, Disability Science and Nursing Science – are all linked to the Faculty of Medicine and Health at Örebro University. Two self-evaluations covering medical sciences and health sciences, respectively, were made available. It should be noted that a number of researchers are listed in both the RÖL as well as the faculty bibliometric analysis. The panel noted the excellent collaboration and interaction that exist between ORU and RÖL since the start of the Medical programme at the university. The panel was also asked to give a total assessment of RÖL, but the panel concluded that this could not be made in a correct way due to the many differences between the subunits. From the total assessment the panel has stated the following:

The publication profile demonstrates a widely spread research focus with some of the researchers standing out as productive. These productive units with highly cited publications belong to *RÖL Biomedicine* (one top 1 % and three top 25 %) and to *RÖL Surgery* (five top 5 %, one top 10 %, and eight top 25 %). They can also be found in *RÖL Medicine* (two top 1 %, four top 5 %, two top 10 %, and 12 top 25 %). There is a certain degree of international collaboration, but it is obvious that the quality of the research is uneven. Some research groups are much more successful than others and some are even well below what can be expected. That being said, the quantity represent 3 % of the Swedish clinical research production, which has been achieved without the contribution of central funds in the form of ALF³. It is obvious that some of the research groups, especially those within the concept of translational research at the different “centres,” have been successful – sometimes in an outstanding manner. The interactions within these “centres” have a great potential to increase the impact even further.

The Panel's Evaluation

In this following chapter, the panel presents the summaries of its discussions and the agreed grades for all the subunits. The overall evaluation of the research at Örebro University by the panel is:

Örebro University has strong research areas in all three faculties, *Medicine and Health* (three subunits with the grade “Very Good”), *Faculty of Business, Science and Engineering* (one subunit graded “Excellent”, and one subunit “Very Good”), *Faculty of Humanities and Social Sciences* (five subunits graded “Very Good”). For a very young university (15 years since its transition from a university college to a university) the outcome of this evaluation must be regarded as very good.

Örebro in December 2015

Dan Brändström

Chair of ORU2015 panel

³ ALF: Avtal för Läkarutbildning och Forskning; *Agreement on Medical Education and Research*.

Faculty of Business, Science
and Engineering

Business Administration

First Rapporteur: Lars Hassel

Second Rapporteur: Kimmo Nuotio

Quality of Research

Business Administration (BA) has a key position in educational programs at the School of Business. A main part of the faculty is engaged in teaching a large number of students. The panel notes that BA has been able to quite rapidly transform from a pure teaching oriented unit to gradually incorporating research and doctoral education into the operations. The proportion of faculty with no teaching time in their work is still high which makes the research output on average low compared to more research-intensive units at the university. BA is, however, gradually establishing itself nationally with distinct research profiles and moving towards more international influence. Such a process takes time especially when it is based on internal competence development and limited resources allocated for research.

At BA, research output comes mainly from the Centre for Empirical Research on Organizational Control (CEROC) and Centre for Inter-Organizational Network Research (INTERORG). CEROC constitutes a multi-subject research environment rooted in the management accounting and control research tradition. The focus of research is on the roles and development of contemporary management control practices. Social and ethical aspects have more recently been integrated into and broadened the traditional control perspective. CEROC has during a relatively short period become a leading research environment on management control issues in Sweden with an international outreach with publications in high ranked journals in organisational and social perspectives on accounting. The volume of scientific output is still limited. Members from CEROC tend to have joint publications, which limits the overall volume. The research at CEROC is relevant for a business school at the same time as concentration of output has left vital areas of BA uncovered by research. This is a trade-off between scope and depth at a small research unit.

The focus of the INTERORG group is on network issues in the external flows between industrial firms including strategy, supply chain and innovation related issues. INTERORG is a broad and relatively heterogeneous construction that cuts across traditional marketing, management and entrepreneurship subjects. The common denominator for the group is network and systems based frameworks. The volume among lead researchers has been relatively high and the diverse group naturally covers a relatively broad spectrum of subjects. Some of the publications have appeared in higher quality international journals.

When judging the overall quality of the BA group we note that on the subunit level almost half of the faculty seems to be only engaged in teaching and does not report for research output. It looks like the 20 % time for professional development for senior lecturers is not used for research. The relatively low number of research-oriented faculty is one of the major challenges for the BA department. When it comes to actual publications during the period the Web of Science based bibliometric analyses reveal that the subunit scores are below average when citations are normalised to sub-field and journal set. The overall international impact is therefore low. The vitality score also indicates that the mean reference age is less current. The majority of the publications are also on level 1 on the Norwegian list.

Research Environment and Infrastructure

BA has three faculty-funded permanent professors and one fixed term senior professor. The number of listed senior lecturers is 18. Additionally, BA has eight lecturers (adjunkter). About half of the senior lecturers and all lecturers with one exception do not seem to be engaged in research. BA has only a limited number of doctoral students (4) registered at the home institution. The number of professors is low considering the great responsibility for teaching that BA normally takes on at a business school. Faculty funded strategic investments for research have been made by the university on all faculty levels to provide time for research and external funding related activities. The professors, together with the senior lecturers that have reached the docent level, provide natural research leadership.

Scientific and Social Interaction

Collaboration mainly takes place in national research networks and the faculty staff has been recruited in Sweden. The main international networks are in terms of publications. BA has had visiting international faculty but the research environment is mainly domestic. The strong research areas have been competitive in attracting research funding from Swedish foundations, such as the Swedish Research Council. There is potential for growth in research funding considering the importance of company stakeholders at a Business School.

Future Potential

The established research environment described above has a potential to sustain and develop further if the key researchers find support by the university to stay at the school. A key success factor is also external research funding. A strategic and an operational risk is that the research-oriented faculty is vulnerable and dependent on a few faculty members.

Summary and Recommendations

BA has a strong research environment in CEROC that needs further support from the university and external funding in order to sustain and strengthen its position as a leading research environment on management control issues in Sweden. INTERORG is more of a temporary research group that has grown organically. Vital parts of the group will sustain with external funding and support from the university in order to be able to allocate time for research.

BA is the major element at a business school. On the way from a teaching oriented to a research based school two measures can support BA to increase the volume and quality of research:

- The proportion of research faculty can increase with a tenure track system.
- A policy for publication quality is likely to increase the international impact.

When providing the overall grading of BA there is a need to mention that there are research groups that are well-established and have international potential. CEROC has an excellent position in the specific area in Sweden and INTERORG has a good quality but not the same collective breakthrough. When it comes to the overall score of BA research, the majority of the panel support a grade of 2 (sufficient) because BA scores low on the bibliometric analyses.

Overall Grade: 2

Economics and Statistics

First Rapporteur: Lars Hassel

Second Rapporteur: Kimmo Nuotio

Quality of Research

Economics and Statistics (ES) are normally areas that bring strong research orientation to a School of Business. This is also the case at Örebro University. ES constitutes a joint research environment at the university where applied empirical research in Economics is combined with research in the development of statistical methods within survey methodology and Econometrics. Economics research is directed to Public Economics, International Economics, and the Economics of Entrepreneurship and Institutions. The research is policy oriented and predominantly based on Econometric analysis of micro (big) data. The research in Public Economics concentrates on health, public finance, and transport and procurement issues. The research in International Economics and the Economics of Entrepreneurship and Institutions is policy oriented by using large employer-employee panel databases. The research in Statistics deals with the production and analysis of observational data. Modelling of time series based on micro data provides a common fruitful Econometrics based research ground across ES.

The research teams in International and Public Economics are well-established areas at Örebro University and the teams overlap to some extent, limiting the volume of publications. In Public Economics, transport and forest related research is nationally established research profiles. Health Economics has become a focus research area both in volume and quality, but the panel wants to see more co-operation with medical and health sciences. Another strong area in development is Economics of Entrepreneurship and Institutions with a more limited volume but good quality. In this area there should be a potential to work together with business. Researchers in Entrepreneurial Economics reach the top in citations in their field while also researchers in Public Economics, especially Health Economics are also ranked high. ES as a whole is a relatively active research environment with relevance for a business school context that combines international publications with participation in public policy debate.

When judging the overall volume and quality of the ES group we note that on the subunit level many of the faculty are able to both teach and do research. The proportion is higher than in BA. There are a few senior lecturers and lecturers that do not have research time in their employment. For them it looks like the 20 % time for professional development for senior lecturers is not always used for research. To involve all faculty members in research and to increase the research volume, continuous effort to receive external funding is needed. When it comes to actual publications the Web of Science based bibliometric analyses reveal that the subunit scores on average when citations are normalised to sub-field and journal set. The overall international impact is on average level. The vitality score also indicates that the age of the cited references is less current. The majority of the publications are also on level 1 on the Norwegian list.

Research Environment and Infrastructure

ES has four faculty-funded full permanent professors and one guest professor contributing to research output. The number of listed senior lecturers is 12. The permanent faculty have doctoral degrees and the ambition is that all do both research and teaching. We note the low number of female faculty members. ES has six doctoral students registered at the home institution. Faculty funded strategic investments for research have been made by the university to support postdoc research. Established researchers lead the research teams and the research environment does not depend on single individuals.

Scientific and Social Interaction

Collaboration at ES takes place in both national and international networks. The International Economics team has strong international networks, including African universities. International organisations included are the Organisation for Economic Co-operation and Development (OECD) and the World Trade Organization (WTO). The Swedish International Development Cooperation Agency (SIDA) has been an important collaborator in Africa. The team has been successful in receiving both national and international funding. The Public Economics team has also been successful in attracting funding from several Swedish financiers. The strong research profile in Entrepreneurship collaborates in international academic networks, and has received funding from agencies promoting economic and regional growth.

Future Potential

The established research in International and Public Economics and emerging profiles in Health and Entrepreneurial Economics have potential to develop further when key resources are allocated to the school, when level of external funding is robust and when networking takes place with Medical and Health Sciences. External research funding continues to be a key success factor. Intensifying collaboration between Entrepreneurship in Business and Economics may also be a potential road to success. The business school could also support co-operation between Corporate Finance and Financial Economics. The Econometrics research is a valuable resource in this respect.

Summary and Recommendations

ES is a research driven environment that involves most of the faculty in research. The subunit has nationally established research teams as well as internationally competitive teams. External funding is a key element for future research success. The performance provides evidence that ES is already a solid research environment and it possesses all the preconditions of further progress

The leading researchers are targeting higher quality journals at the same time as the amount of uncited papers is rather high in ES. A recommendation is to set up a publication strategy based on journal rankings in order to increase the quality of publications in the long term and make the research more competitive for external funding.

There is also potential for collaboration between ES and BA. Entrepreneurship and Finance provide opportunities in this respect. Both are important for a contemporary business school profile.

When providing the overall grading of ES there is a need to mention that there are research groups that based on Web of Science metrics are well-established and have international potential. Health and Transport Economics related to Public Policy and Entrepreneurial Economics score high in a national context. When it comes to the overall score of ES research, the majority of the panel support grade 3 (good) because ES scores on an average level on the bibliometric analyses.

Overall Grade: 3

Informatics

First Rapporteur: Peter van den Besselaar

Second Rapporteur: Catarina Coquand

Quality of Research

The Web of Science data indicate weak productivity and weak impact. There are no top cited papers. However, the vitality of the research is good. The scores in DiVA point in the same direction. Total productivity in terms of the Norwegian model is 0.8, thus below the reference value based on Swedish universities.

The subunit has produced only a small number of PhD degrees.

The topics the subunit focuses on are highly relevant, but the self-evaluation only describes the topics and no results or contributions to the field are mentioned. The high vitality score in the bibliometric report suggests that the subunit resides in the research front, but the low impact creates doubts about significance, originality and relevance.

Research Environment and Infrastructure

Two of the three professors score relatively well, while the others have low output and impact. This holds for Web of Science but also for the DiVA scores.

A substantial share of the permanent faculty members has no or only little research time, which makes it difficult to develop a high quality research program.

The level of resources is reasonable, but scattered. The subunit consists of six research groups, which gives a mean of two persons per group. With 30 projects listed, the resources and focus seem scattered.

Two of the three professors are above 60 years old, implying a change at the top level in the years to come. This is a risk (as one of the two is the most productive researcher in the subunit) but also an opportunity for renewal and new development.

In terms of leadership, the described strategy is rather incomprehensible. The group did not focus on good publications until after ten years. This strategy is not a convincing explanation of the low Web of Science scores, as the DiVA score is also low compared to the Swedish average.

Scientific and Social Interaction

The subunit does not seem to have any funding from the European Commission, which may explain the low level of internationalisation; but it is also strange given the focus of research that would have fit very well in the 7th Framework Programme.

Co-authors are mainly local researchers from Örebro University.

The self-evaluation claims a substantial impact on companies and organisations. We agree that this should be the case, given the focus of the subunit. However, the self-evaluation lacks some instructive examples.

Future Potential

The viability and potential breakthrough is difficult to assess. The research topics are up to date – and this would enable attracting funding for research, but it requires stronger leadership focusing on improving research quality as well as internationalisation.

The team is young, and there are opportunities to hire new professors in a near future, bringing in new ideas and impulses.

The subunit has a lot of students, which is a good basis for sustainability. However, the subunit may not be in the right environment. Collaboration with other units seems advisable. For example, a collaboration with computer science and robotics would fit in terms of topics as there are interesting opportunities in the interaction between robots, humans and society. Security and system development can also connect with The Centre for Applied Autonomous Sensor Systems in computer science. Close contacts between schools for informatics and computer science are common around the world.

Summary and Recommendations

- Low productivity and impact
- Internationalisation is needed
- Overall staff quality needs attention
- Focus research
- Strategy is not clear
- Repositioning closer to computer science and robotics

Overall Grade: 1

Biology

First Rapporteur: Stefan Nordlund

Second Rapporteur: Anders Ekbohm

Quality of Research

Fifty-seven publications 2008 – 2012 have been recorded, which is fairly low considering the number of active scientists including PhD students. The overall international status is OK, being in the Top 25 % relative to Swedish researchers. A fair number of publications are within the international Top 10 % class. As is common for publications in Science the number of authors per publication is usually higher than one. The DiVA analysis indicates that nearly 50 % of the publications are at level 2, but Biology at Örebro University is still clearly below the reference value.

When breaking down the bibliometric analysis to individual researchers it is clear that some of the co-authors are within the subunit, and that the international and national impact differ between individual researchers.

The overall quality is rather high, but efforts should be made to increase the number of publications as well as citations for some of the members of the subunit.

The projects are described as part of two centres, Man-Technology-Environment and Life Science, in which groups from other departments at Örebro University also participate. It is not clear to what extent these two centres support research and if there are benefits for the individual scientists involved.

Clearly the biology projects in these centres are significant and the problems dealt with are very relevant in today's society. One focus is on pollution and the various effects of pollutants. The Örebro Isotope Laboratory is an important and powerful tool in a number of projects at Örebro University and other universities.

Research Environment and Infrastructure

There are four professors, three senior lecturers, two assistant professors, one researcher and four PhD students in the biology subunit. The senior lecturers have good allocation of research time, but surprisingly not the researcher and one of the assistant professors, considering their career level.

The coherence is mainly manifested as a focus on pollutants and their effects in all projects. The number of projects is however rather high considering the number of individuals in the group. It is recommended to establish a more narrow focus of research.

The level of funding seems to be inadequate in relation to the projects. The only granting research council is The Swedish Research Council Formas, complemented by a number of other sources, e.g. the Carl Trygger Foundation and the Knowledge Foundation.

There is no clear indication in the provided material as to who is the leader and in what way. This is in fact the case for most evaluated units. Concerning the organisation one can again ask what benefits the individual scientists get from being part of the two centres.

Scientific and Social Interaction

Out of 179 collaborators, as shown in the bibliometric analysis, 46 are from international institutions. In addition the subunit is involved in a PhD program financed by The Swedish International Development Cooperation Agency (Sida).

Out of 133 Swedish collaborators, 84 are from Örebro University or the Örebro University Hospital, whereas the external collaborators come from six other Swedish universities.

There are no clear indications that the subunit has strong interactions with the society outside the academic world. Also, none of the funding agencies are industry or municipalities. In view of this, the statement “The biology program is being revised to focus on scientific entrepreneurship, in line with our industrial ties” is surprising. Also a note of caution: it is important that external bodies do not influence the academic programs or research in a way that leads to loss of scientific quality and integrity.

Future Potential and Recommendations

Based on the bibliometric analysis, vitality is around average, and the panel finds it difficult to give a level of breakthrough potential based on the facts given. One could argue that it is important that junior scientists get more research time if any potential is going to be realised.

The age profile of the faculty is acceptable. However, if the subunit should maintain or increase the present level of quality and output, all faculty must contribute to research. Furthermore, one of the faculty who is among the top 25 %, must be given research time and possibly a more secure position. See Annex G for comment on the didactic research in this subunit.

Overall Grade: 3

Chemistry

First Rapporteur: Stefan Nordlund

Second Rapporteur: Anders Ekbohm

Quality of Research

One hundred and twenty publications 2008 – 2012 have been recorded which is acceptable considering the number of active scientists including PhD students. The overall international status is one of the highest of the evaluated subunits, being in the Top 10 % relative to Swedish researchers. Twenty-one (21) per cent of the publications are within international Top 10 % class. As is common for publications in Science the number of authors per publication is usually higher than one. The DiVA analysis indicates that more than 50 % of the publications are on level 2, and compared to the reference value, Chemistry at Örebro University is essentially at average level.

When breaking down the bibliometric analysis to individual researchers it is clear that some of the co-authors are within the subunit and that the international and national impact differ dramatically between the individual researchers. In some cases, but not all, this can be explained by the research time allocated.

The overall quality is high, but efforts should be made to increase the number of publications as well as citations for some of the members of the subunit.

As for Biology the projects are described as part of two centres, Man-Technology-Environment and Life Science. As stated for Biology, it is not clear to what extent these two centres support research and if there are benefits for the individual scientists involved.

Clearly the chemistry projects in these centres are significant and the problems dealt with are very relevant in today's society. One focus is on pollution and the various effects of pollutants, where high expertise in analysis is vital. Another successful area is the studies on the effects of UV-radiation on biological material as well as other materials.

Research Environment and Infrastructure

There are four professors, five senior lecturers, two assistant professors, two postdocs and five PhD students in the chemistry unit. All but one of the senior lecturers have good allocation of research time.

The coherence is for a number of groups mainly manifested as a focus on pollutants and their effects. The number of projects is however rather high considering the number of individuals in the subunit, although some seem to be overlapping.

Funding is from the European Union, the Swedish Research Council, the Swedish Research Council Formas, the Knowledge Foundation and other foundations, but also from authorities and industry. From the material provided, it cannot be judged whether funding is at a realistic level.

There is no clear indication in the provided material as to who is the leader and in what way. This is in fact the case for most of the evaluated units. Concerning the organisation one can again ask what benefits the individual scientists get from being part of the two centres.

Scientific and Social Interaction

Out of 353 collaborators, as shown in the bibliometric analysis, 86 are from international institutions. In the self-evaluation, a number of additional collaboration partners are mentioned.

Out of 266 Swedish collaborators 182 are from Örebro University or the Örebro University Hospital, whereas the external collaborators come from five other Swedish universities.

There are no clear indications that the subunit has strong interactions with the society outside the academic world. There is however funding from industry and authorities, national and international.

Future Potential and Recommendations

Based on the bibliometric analysis, vitality is the highest among the evaluated subunits. The panel finds it difficult to give a level of breakthrough potential based on the facts given. It is however important that the junior scientists can maintain a high activity level if any potential is going to be realised.

The age profile of the faculty is good. If the junior faculty is given continued support, there is a good prospect of maintaining the high level of output and quality.

Overall Grade: 5

Mathematics, Physics, Didactics in Mathematics, Didactics in Natural Sciences

First Rapporteur: Kenneth Nordgren

Second Rapporteur: Stefan Nordlund

Quality of Research

The subunit shows a stable production of articles with a growing trend. The publications hold good international level and high national level. The normalised journal citation score is over average. According to DiVA, 27 publications are on level 2 and 26 on level 1. There are contributions from most of the senior staff and significant contributions from senior lecturers.

When breaking down the bibliometric analysis to individual researchers it is clear that the production as well as the international and national impact differ dramatically between the different researchers.

Unfortunately, there is no information on to which subject the scientist belong in the bibliometric analysis or in the self-evaluation. However, it seems clear that the high overall international status is mainly due to the production of three scientists in physics and mathematics. It should also be emphasised that Didactics in Mathematics has established a high status. No PhD degrees have yet been awarded.

The research is reported as being in close relation to applications in computational related areas, which clearly is both significant and relevant. Physics is a more fundamental research area which has relevance as such. Considering the present situation in schools today with respect to learning outcome in mathematics and science, studies in didactics in these two areas is of great importance and relevance. The research group Mathematical Education is describing a relatively clear vision of research interest. They are outlining a relevant design-based research, with possibilities for originality and significance. Science education addresses important aspects of early childhood education, such as the role of visualisation. The outline about Science education is short but relevant. It states some general aspects of understanding and attitudes. This indicates no special originality.

Research Environment and Infrastructure

Three professors, seven senior lecturers with varying research time, two postdocs, one PhD student. Two of the lecturers seem to go for a PhD degree. The coherence within the subunit is by definition not high, but within mathematics and physics it is. It is difficult to analyse the situation in “didactics” especially in science education. Funding is provided by the Swedish Research Council (VR) and Bank of Sweden Tercentenary Foundation (Riksbankens Jubileumsfond), but again it is difficult to judge to which area and to what extent.

In relation to didactics: There is no explicit research group connected to Science education. Mathematics educations mentions two projects, they are not to be found in the listed research projects. There is a project about national tests that is not obviously related to the interests stated by the group. There is little data to review the infrastructure of the didactical research except noticing that they are a few active researchers. There are nevertheless two ongoing projects funded by the Swedish Research Council.

There is no clear indication as to who is the leader and in what way. There is a short strategic discussion in the self-evaluation with clearly stated aims. The aim of the research group in mathematical education is clearly described.

Scientific and Social Interaction

Bibliometric data indicate moderate international co-authorships and collaboration with Australia and Great Britain. The self-evaluation confirms this and addresses it as something to be developed. The science didactics studies on preschool teachers are involved in an international comparative study.

The bibliometric data indicate frequent collaboration within the university, as well as nationally. Out of 67 national collaborations 19 are within the university.

Future Potential

Vitality is 1.09. The bibliometric data indicates some international impact. The self-evaluation mentions a need to concentrate. The professor in mathematical education has a good track record but is in need of a larger group.

The subunit as a whole seems stable. The age profile is good, but clearly the sustainability in different the different areas can be discussed. Several of the senior lecturers have research activity and are publishing. A problem is the lack of PhD students. The didactical research is totally dependent on a few important persons and is thus vulnerable. Major efforts have to be made to strengthen Science education.

Summary and Recommendations

The staff is quite young, with high production rate. There seems to be a need for a strategy for the organisation of this subunit. The didactics is not easy to distinguish in the data; it seems to be a group that makes impact with little resources. The didactical research is in need of organisation and infrastructure. See Annex G for comment on the didactic research in this subunit.

Overall Grade: 3

Computer Science

First Rapporteur: Catarina Coquand

Second Rapporteur: Hans Johannesson

Quality of Research

For reasons stated in the general introduction to this chapter, it was difficult to evaluate the bibliometric data for this subunit and we noted that some articles were missing (in robotics). The quality of the research seems to be high and the external funding of projects also indicates high quality. The research is mostly performed in collaboration with industry in an area of vital importance for Swedish industry. The Centre for Applied Autonomous Sensor Systems (AASS) has been successful in raising external funding from national sources and from the European Union (EU). The centre collaborates with Swedish industry and are active in EU networks. Exchange and collaboration with well renowned international universities would be a recommended next step.

Research Environment and Infrastructure

The subunit is an extensive research environment with 32.4 full-time equivalent researchers engaged in research 2014. It comprises more than half of the School of Science and Technology. The staff structure seems well balanced and fit to produce good research, quantitatively as well as qualitatively.

The number of PhD students seems low, but it seems that there are also industrial PhD students. A group of this size should have at least 20-25 PhD students. If this is not the case, the subunit should consider a strategy for increasing the number of PhD students, since more doctoral students usually also increase the number of publications.

The subunit seems to be well organised with two laboratories and a leader for each one.

Scientific and Social Interaction

The group has very strong interactions with Swedish industry; mostly with large companies, but also some small and medium-sized enterprises.

It is difficult to draw any conclusions on the scientific network since the material only covers publications in Web of Science, but it seems that this is an area for improvement. In particular, collaboration with strong international universities is recommended. The group has funding from the EU and also has coordinated one EU-project.

Future Potential

The group was early with research on semantic robots, but this is an area where other universities in Sweden are catching up and therefore recruiting might become difficult in the future. However, the growing interest around Internet of Things, big data analytics/AI and cloud solutions opens up for new collaborations and projects.

Future success of the research will probably depend on how well the groups can utilise the "research profile" funded by the Knowledge Foundation. With the competition from the Wallenberg Autonomous Systems Program, the ability to perform interdisciplinary research within AASS will be a key factor for success.

The university could also consider how other areas can strengthen and be strengthened by robot and sensor technologies. There are several possible applications areas where collaboration within the university would be fruitful, but this seems not to be fully explored yet.

Summary and Recommendations

Overall this is a strong research area in a field that is highly relevant for Swedish industry. But it is also an area in which Swedish universities are generally very strong and the competition can be tough. It is therefore important to maintain strong scientific leadership and to further build up the scientific networks and interdisciplinary research.

The PhD graduation track record is a bit low given the size of the group in 2014. This might be due to an increase in the number of senior researchers in the last five years. If this is not the case, it is advised to consider the quality of the research education.

It was difficult to see the proportion between external and faculty funding in the material provided. For a group in this area one would expect at least 60 % external funding. See Annex G for comment on the didactic research in this subunit.

Overall Grade: 4

Mechanical Engineering

First Rapporteur: Hans Johannesson

Second Rapporteur: Catarina Coquand

Quality of Research

- $7/5 = 1.4$ papers/year 2008-2012 (field normalised citation score = 0.05)
- $?/5$ journal publications 2008-2012 (journal normalised citation score = 0.2)
- 0 DiVA level 2 publications
- h-index: Unknown

The publication volume in terms of Web of Science listed papers is low, $1.4/3.3 = 0.42$ papers per full-time equivalent researcher each year 2008 – 2012. This should be increased. The Web of Science citation indicators are low and the group's h-index is unknown, probably very low. There are furthermore just nine DiVA level 1 and zero DiVA level 2 publications from the subunit during the period. The vitality is however close to 1 which could be interpreted as a potential future increase in publication rate from this two year old group. The professor who got the PhD award 1985, should be expected to have an h-index of at least 5-10 provided a publication average rate of a couple of publications per year since then.

The poor bibliometric results show that this group, that was restarted two years ago, has not yet has taken off and established itself as a research group with critical mass.

Research education:

- Three doctoral students per professor
- Five PhD degrees and one PhL degree 2008-2015

The PhD graduation track record seems OK, 0.71/professor each year 2008-2015. However, there are no PhDs awarded since 2010. The present professor was recruited two years ago with the restart of the research in the field. The graduation track record is therefore history and the first graduated PhDs of the new generation could be expected 2-3 years from now. This is however dependent on how the group and its research develops.

Research Environment and Infrastructure

- One Professor: 0.7 full-time equivalents in research 2014
- Four Senior lecturers: 0 full-time equivalents in research 2014
- Three Doctoral students: 2.6 full-time equivalents in research 2014

The Mechanical Engineering subunit is a sub-critical research environment with 3.3 full-time equivalent researchers engaged in research 2014. It comprises just 5.5 % of the School of Science and Technology. The staff structure reflects a focus on undergraduate teaching. The only senior researcher who is engaged in research and doctoral student supervision during 2014 is the professor. This is not a sustainable situation and it cannot be expected to produce qualitative research of some quantity. To get some realistic momentum, and start to build a research group with critical mass, at least two assistant professors and a couple of new good doctoral students that can spend minimum 80 % of their time on research should be recruited immediately.

The main research area of the Mechanical Engineering subunit is production systems and manufacturing processes. They also claim that they have some interest in Computer-Aided Design and product development. Their main field of expertise is in the production and manufacturing areas though.

Scientific and Social Interaction

The group collaborates with Swedish industry and have one industrial doctoral student. This is a very good approach to build on which secures the industrial relevance of the research, provides the group with interesting research opportunities and contributes to knowledge transfer to the industry. A prerequisite for this kind of collaboration is however that there always must be a scientific challenge involved. In order to succeed with this approach it is also crucial to have agreements with the employing companies that allow the students to spend minimum 80% of their time on their research and graduate courses.

Research collaboration with industry is conducted within the Alfred Nobel Science Park.

Exchange and collaboration with internationally well renowned universities is not yet established. Some contact exists with potential partners for joint funding applications in Europe. The group has external funding from the Knowledge Foundation, VINNOVA and Swedish Foundation Gunnar Sundblads forskningsfond.

Future Potential and Recommendations

The self-evaluation seems adequate. As mentioned, the main scope of the research in Mechanical Engineering is production systems and manufacturing processes. The focus in Örebro is on Additive manufacturing, Industrial tomography and Forming processes. These are focus areas that also can be found at other Swedish Mechanical Engineering institutions. Considering the limited size of this group, collaboration with those institutions should be of interest. One nearby potential possibility could be research collaboration within these areas with Mälardalen University and Robotdalen Science Park. This science park has already established relations with Alfred Nobel Science Park. The Computer Science group at Örebro University, which is conducting extensive research on robotics and is a member of Robotdalen, may also be considered as a future research partner to the Mechanical Engineering group. Other external future research partners could also be found at the Royal Institute of Technology, Chalmers University of Technology and the faculty of engineering at Lund University.

Overall Grade: 1

(Considering only two years of operation, but with positive potential to increase with successful recruitment and attraction of external funding.)

Faculty of Humanities
and Social Sciences

Culinary Arts and Meal Science

First Rapporteur: Katarina Eckerberg

Second Rapporteur: Stefan Nordlund

Quality of Research

The research focus has its base in the social sciences/humanities and comprises three areas: (i) The meal as experience and aesthetic design, (ii) The meal in the community room, (iii) The meal for health, safety and sustainability. It is highly interdisciplinary work involving food chemistry, food technology, nutrition, physiology, psychology, sociology, media and communication studies, gender studies, cultural geography, agroecology, culinary arts and collaboration with biomedicine and (public) health sciences. Fields of publication include nutrition and dietetics, public environmental & occupational health, and food science and technology. The new faculty-funded professor (employed in 2012), has a background in nutrition and has heightened especially the third research area. Since 2002, research has resulted in eight PhD and two licentiate theses, plus two PhD theses in collaboration. The number of publications is growing each year, however, only four researchers in this group have published over the five-year period, which implies a rather poor average for the group.

The research areas are highly relevant and quite original given the youth of this academic orientation, and especially the third area is very topical since the societal interest in sustainable food is growing rapidly. The publications achieve a good citation impact, but there are no top papers. The DiVA scores are 30 % above the Swedish average. The works of the two senior professors stand out in the bibliometric data (top 25 % and top 50 % respectively). There is high societal relevance of this research (see also under the heading Scientific and social interaction).

Research Environment and Infrastructure

The research group involves two permanent professors, six senior lecturers, 11 lecturers, one visiting professor and lecturer, and three PhD students, which should allow for sufficient diversity of competence given the interdisciplinary character of the research. Many of them are on fixed contracts and, as noted above, are not allocated any specific research time. The university research spending is not impressive, with an average of about 1.4 MSEK per year in the five-year period 2010 – 2014 for the entire School of Hospitality, Culinary Arts & Meal Science. Only one resource of external funding is reported and with no amount given. In particular, there should be opportunities to further strengthen the research in the third area, both with relevant calls on sustainable food by the Swedish Research Council Formas as well as calls by EU Horizon, drawing on international networks.

Two full professors and one associate professor lead the three research groups, which seems adequate. However, for some reason only the visiting professor shows up in the bibliometric study of collaboration networks together with one of the senior lecturers. The self-evaluation provides little information on how the research groups are working, even if it is evident that the third group is by far the strongest.

Scientific and Social Interaction

The research is presented and published as conference proceedings and articles in scientific journals. Conference attendance and presentations are in sensory science, food culture, tourism and hospitality, culinary arts and nutrition. The subunit organises conferences and is visited by international researchers. The bibliometric data shows collaboration with Vrije University Amsterdam, Oslo and Akershus University College, Oslo University and Tartu University. One would, however, expect more co-authored publications with international colleagues from this subunit since the research topics are indeed internationally relevant. The international networking deserves further strengthening, not least to attract external funding and raise impact.

There is collaboration between the School of Science and Technology and the School of Hospitality, Culinary Arts & Meal Science. In addition, the bibliometric data shows collaboration with Karolinska Institutet and with the University of Gothenburg. Even if the lists of current research projects do not mention collaboration, there is reason to believe that additional national collaboration could support the research groups.

This is an interdisciplinary subject with aesthetic and practical parts, where collaboration with industry partners is central. Collaboration takes place with hotels and restaurants, as well as with retail companies such as ICA and COOP. The school has developed the Five Aspect Meal Model (FAMM), which serves to plan and analyse meals. The model is now applied by the Swedish National Food Agency, the National Board of Health and Welfare and the public meal sector in Sweden, which is commendable.

Future Potential

There was a notable decrease in research expenditures during the years 2012 and 2013 compared with previous years, but the expenditures have risen again in 2014. The bibliometric data shows an increase in the number of publications, albeit slow, over the years. One should, however, be aware of the fact that this is a young field of research in an area dominated by applied approaches in which very high scientific impact is perhaps not to be expected. The Meal Ecology Programme should have particular potential to raise interest that could lead to funding.

The group has good vitality and particularly the third research area has considerable potential. Nevertheless, the most productive researcher is 60+, which constitutes a risk.

Summary and Recommendations

This is a rather new field of research with good interaction outside of the university, but still with possibilities to further strengthen international and national collaboration with academic and industrial partners. Since the research outputs currently stem from a few individuals, support for lecturers to participate in research would strengthen the sustainability of the group. It will be important to address the issue of increased research funding through new sources such as the Swedish Research Council Formas and EU Horizon.

Overall Grade: 3

History

First Rapporteur: Kenneth Nordgren

Second Rapporteur: Gudrun Dahl

Quality of Research

In the bibliometric data there is information only from DiVA and the Norwegian model for this subunit. All but one of the registered publications are on level 1 (Norwegian model). The majority of the registered publications (15 out of 20) are written by the two professors. The professors have sums of publication points that are above the national average. Two lecturers and one researcher lack registered publications: One can note that one of them is missing in the list of results despite having had $\frac{3}{4}$ -1 of full-time equivalents research activity during the last years. No PhD students are listed, but given the size of the subunit the output of one dissertation per year is quite satisfactory.

The supplied bibliometric data does not give much basis for evaluating this subunit, but the DiVA records give no reason for criticism. The topics appear socially relevant and well chosen. Research related to gender and to popular culture, as well as sport science, is making a significant impact within the field of Swedish history. Current research projects indicate openness to topical issues, both in the choice of topic and in theoretical approaches.

Research Environment and Infrastructure

It is a small subunit. There is a male and a female professor, who appear to have good scientific competence. It is not possible to see from the supplied material how the financial resources look, except that the two professors are internally financed. External funds have been secured from the Bank of Sweden Tercentenary Fund, the Swedish National Centre for Research in Sports and the Swedish Research Council, which give witness to the quality of the subunit.

According to the self-evaluation, the research has two main foci:

- a) Narration, Life and Meaning
- b) The relation between the collective action of social movements and social change.

To be mentioned in addition is research on comparisons of paternalistic industrialism in Sweden and Japan, the Swedish welfare state and studies of critical masculinity. Consulting the data from DiVA, one can also see that two of the researchers have a strong profile in areas on women and gender history, without this being particularly highlighted. The emphasis, at large, is on medieval history and on contemporary conditions ("modern history")

The self-evaluation states on the one hand, a strategy on two foci, but on the other hand, that research projects are individual endeavours. There are more Additional Research Groups than there are senior staff members. Historical research apparently engages more researchers than are listed. Several of those are related to sport and involve one of the professors and one PhD student. There is a newly started subject-didactical research project. The research environment Narration, Life and Meaning is interdisciplinary and has been running since 2009.

During the period there is only one senior lecturer with research activity besides the professors.

There is a lack of discussion in the self-evaluation about weaknesses and how to address them. There is a strategy mentioned, but no means are discussed or exemplified. The structure of the given information makes it difficult to evaluate the organisation. The text lists one interdisciplinary "research environment" and five or six (there is an apparent duplication) "research groups", of which all are interdisciplinary. The contribution of research time and scientific perspectives offered by History to each of these is not specified. The extent to which the subunit History has any organisational content – resource control, activities etc. – is unclear.

Scientific and Social Interaction

There is no bibliometric data from Web of Science for this subunit and no international assignments are mentioned. There is international research collaboration with Japan (unclear if it is ongoing). On a national level, again there is no bibliometric data to indicate scientific networks. In the ORU Database Information, the research groups/themes and environments show interdisciplinary network within the university. Interaction with society is primarily through public lectures, presenting monographic work on the union and the city.

Future Potential

The bibliometric data indicates a long way to an international breakthrough. The senior lecturers are relative young and have the possibility to strengthen the publication volume. The senior lecturers have, according to the website, both research publications and textbook publications. The historians have a tradition of publishing monographs in Swedish, which is understandable in relation to the subject of Swedish history, the complexities of translating Swedish concepts and conditions, and the expected range of interested readers. However, it would probably be possible to have a better international outreach on certain topics that are central to the subunit's interests, such as masculinity, sports, the Swedish welfare system, and popular movements. Such translation may involve new demands of methodological and theoretical explicitness, as well as reflections on what dimensions of Swedish conditions need to be elaborated on to suit a foreign audience.

The subunit is a small department. The sustainability of the subunit depends on the timing of retirement for the professors, which will occur in the next 0 – 4 years. The senior lecturers have no or little resources for research activity. It is a bit unclear if the Narration, Life and Meaning environment has the same energy as before. There is some external funding from different sources.

Summary and Recommendations

The total publication volume for the subunit is half of the national average. The total citation value and the individual citations for the four researchers are below the 50 % percentile. There is a spread of contribution within the subunit, but this does not show in the bibliometric data. There are few publications registered on level 2 according to the Norwegian model.

Recommendations:

- There is a need for a strategic discussion on the use of resources, the relation between disciplinary and interdisciplinary efforts, increasing publication and external funding.
- A more extensive scientific collaboration within Sweden may also lead to better rates of intra-Swedish citations.
- Important to provide more research time for junior staff to allow them to advance.
- The effort to initiate a historical didactic research theme could be strategic in relation to the Teacher Education Programme. The effort should be combined with a research environment and a clear strategy.

See Annex G for comment on the didactic research in this subunit.

Overall Grade: 2

Language Studies

First Rapporteur: Kenneth Nordgren

Second Rapporteur: Gudrun Dahl

Quality of Research

In the bibliometric data, there is information only from DiVA and the Norwegian model. All but one of the registered publications are on level 1 (Norwegian model). The majority of the publications (11 out of 19) are written by the two professors. The professors have good sums of publication points, but the collective sum is quite low. Four out of twelve senior lecturers have registered publications. The self-evaluation stresses a tradition of publication in Swedish (Literature and Swedish language). Several lecturers have quite recently advanced to “docent”, which indicates additional publications that are not included in the evaluation material.

There is not much data to review aspects of significance and originality. The mentioned research environment – Narration, Life and Meaning – is a long term interdisciplinary collaboration between literature and history. The listed research projects are of relevance, but do not suggest originality. It is somewhat surprising that there is no formalised “research group” with the heading “Subject Didactics”. From the supplied material, it would appear that this is an emphasis that has to be pushed in a stronger way, if the Teacher Education Board view it as a priority.

Research Environment and Infrastructure

The subunit consists of three quite small disciplines. There does not seem to be any coherence in the subunit. There are two professors in three disciplines and 12 senior lecturers. English has no professor, but according to the self-evaluation, there are plans for recruitment. A guest professor is coming from 2016. Most senior lecturers have had no or very little research activity after their PhD award. All of the senior lecturers in Literature, and one in Swedish Language, have nevertheless been rewarded with the title of docent. The bibliometric data indicate either a focus on low-ranked publishers or a lack of relevant high stake publishers. The two professors are internally funded. The Swedish Council for Higher Education and The Swedish National Agency for Education also give financial contributions. It is noteworthy that there is no money from the Swedish Research Council or the Bank of Sweden Tercentenary fund.

There are three disciplines in the subunit and the organisation is not described. In the overarching evaluation of the Humanities, it is mentioned that there is a newly created research environment in Language studies. According to the self-evaluation, there is a new subject of research under development consisting of Literature, Swedish Language and Rhetoric (but not English?). Those disciplines are meeting every week in seminars. This new environment is mentioned in a subclause. There is no explicit discussion in the self-evaluation about weaknesses and how to address them. The information on Rhetoric, that is offered separately, has a different research emphasis. There is an interdisciplinary research environment since 2009 (Literature – History). Efforts are made to develop didactic research, but the self-evaluation indicates ambivalence on this issue.

Scientific and Social Interaction

There is no bibliometric data from the Web of Science. In the self-evaluation, there are no international assignments mentioned. There is an incoming guest professor. The narrativity researchers take part in European networks dealing with the topic, and have been instrumental in arranging an international conference on the topic. The Baltics, Norway, England are mentioned in this context.

In the ORU Database Information the research groups and environments describe an interdisciplinary network within the university.

There are no indications of societal interactions.

Future Potential

The bibliometric data indicates a long way to a breakthrough. The senior lecturers have the possibility to strengthen the publication volume.

In terms of sustainability, the subunit consists of three disciplines with a rather small group of staff. There is no generation shift in the upcoming years. The senior lecturers have no or little recourses for research activity.

Summary and Recommendations

Language studies forms a new subject of research. It is a bit unclear if the Narration, Life and Meaning environment has the same energy as before. There is a spread of contribution within the subunit, but all of this does not show in the bibliometric data. The self-evaluation stresses a tradition of publishing in Swedish. There seems to be a need to outline a research strategy, in particular to achieve continuity. The effort to start up didactic research could be strategic in relation to the Teacher Education Programme. Such research must, however, be a part of a viable research environment. This underpins the need for a strategic discussion on infrastructures, the use of resources, how to increase publication and external funding. See Annex G for comment on the didactic research in this subunit.

Overall Grade: 1

Media and Communication Studies

First Rapporteur: Peter van den Besselaar

Second Rapporteur: Catarina Coquand

Quality of Research

The subunit has a good productivity and a good impact score. The score for vitality is high, indicating that the work of the subunit is related to recent developments in the field. The score in DiVA is also good, showing a large proportion of level 2 articles (Norwegian model). The bibliometric data shows that the subunit is in the top 25 % in Sweden. However, the bibliometric figures show a relatively low number of top papers.

The research topics are relevant and along with the vitality score, it is suggestive of their significance in the field. Unfortunately the self-evaluation lacks a description of the main results of the research conducted in the recent period, and does not explain how it contributed to the development of the field.

Research Environment and Infrastructure

The bibliometric data shows that only a part of the academic staff is publishing, and also the self-evaluation emphasises this. Quite a few members of staff have no, or only little research time, which makes it unlikely that these staff members can ever develop to become good and productive researchers. This does not need to be a problem, if the research of those staff members is only meant to support their teaching quality, and not to contribute to the development of the field. There seem to be quite a few members of staff without a PhD⁴. If this is the case, it is problematic for the development of the research and for the teaching: teaching-only staff at a university should have a PhD.

The SWOT analysis seems very accurate and honest when reading through the material. Several well-performing persons are in leading positions. The subunit consists of five research groups, with eleven persons with some substantial degree of research time. Hence, there are on average two persons per group, making the groups relatively small. The self-evaluation mentions nine research projects, which is relatively many given the size of the subunit. The reported research capacity is about eight full-time equivalents, so at least some of the projects have some mass.

Scientific and Social Interaction

On an international level, the subunit does collaborate (and co-author) with persons/university in the UK. There is no EC funding reported. The national scientific network is heavily concentrated to Örebro University and appears to be predominantly local. The self-evaluation mentions impact on wider societal level with external stakeholders. Unfortunately, the self-evaluation gives no concrete examples of such wider impact.

⁴ *Editors' comment:* During the meeting it was clarified to the panel that for some of the academic staff, particularly if they got their PhD abroad, there may be no record at Örebro University of their formal qualifications. If the data is missing, it means that the member of staff may hold a PhD.

Future Potential

The size, impact and vitality of the output are good, so there is potential for the future. However, the number of top papers is low, and that demands attention. Also, the issue of academic staff without a PhD award needs attention, if this is not solely a case of missing data⁵.

The research topics are up-to-date, and one would expect that funding will be available also in the future to keep the research going. It is a young team. The self-evaluation explains that the bibliometric score would have been much higher if the subunit had not lost three very productive professors recently. This brings the issue of recruitment on the table and the capacity to retain very good people in the subunit/Örebro University.

Summary and Recommendations

Overall, this is a good subunit.

Overall Grade: 4

⁵ *Editors' comment:* During the meeting it was clarified to the panel that for some of the academic staff, particularly if they got their PhD abroad, there may be no record at Örebro University of their formal qualifications. If the data is missing, it means that the member of staff may hold a PhD.

Musicology

First Rapporteur: Gudrun Dahl

Second Rapporteur: Kenneth Nordgren

Quality of Research

The overall publication rate, registered in DiVA, is slightly below the national average (0.8). In the Web of Science data, a Field Adjusted Production score of 3.3 is produced. Given the available time for research (2.72 full-time equivalents, disregarding PhD students and the 20 % of work time for professional development), this appears to be good and above the expected rate. There are contributions from most of the senior staff. The productivity of the 53 members of staff is in the bibliometric material listed under the heading "HUM/ARTS". Of these, only four staff members have had more research time than the minimal 20 % for professional development. Seven persons are listed as having published. One research associate/professor, two professors and one of the senior lecturers have a higher DiVA publication rate than the average (1.2, 1.5, and 2.3 respectively)

Of the publications registered in DiVA, 15 are on level 2 and 28 on level 1 (Norwegian model). Only a few papers are registered in Web of Science, however, they are frequently cited. The overall citation rate is above the Top 50 % percentile, and citations per paper (NJCS) are at 0.96, i.e. just below the average for the subfield set. The list of individual citation rates includes one Top 10 % and one Top 25 % score. Vitality rates are available for three individuals at 1.32, 1.36, and 1.01 respectively.

Judging from the titles of research projects, this is an area where Örebro University can offer something original on the national level, and possibly also internationally through its highly relevant *combination of musicology, education, and sociology*. The study of music as individual, social, and cultural phenomena – musicology – is a growing, but not a very prominent field neither nationally nor internationally (in contrast to the obvious study subject of the structure and nature of music itself).

The subunit describes a relatively clear vision of its research interest. It is outlining a relevant discussion on research focus and has attracted external funding during the period. There are also a number of research projects with high educational relevance. In summary, the research has good quality and volume, but there is still not a clear breakthrough internationally. However, there is a potential for the future.

Research Environment and Infrastructure

The leadership of the subunit has good academic competence: two professors, and one visiting and one assistant professor; 12 senior lecturers; six PhD students. Of the 53 persons listed as academic staff, only seven appear to hold a PhD⁶. This is a very low proportion, if the subunit has the ambition to expand research and advanced undergraduate studies, and gives a bad start for the research – education link. Few of the senior lecturers have any additional research activity aside from the 20 % time for professional development.

The subunit is successful in getting external funding. It has been supported by extra strategic support from the faculty, which seems to be a wise decision. The research environment indicates a balance between interdisciplinary approaches and a focus on musicology.

In terms of organisation, the subunit has one research environment: "Music and Human Beings". This environment comprises two distinct but interrelated themes/research groups: (a) ACCLAIM, Aesthetics, Culture and Media and (b) MOVE, Musical Expression and Experience.

⁶ *Editors' comment:* During the meeting it was clarified to the panel that for some of the academic staff, particularly if they got their PhD abroad, there may be no record at Örebro University of their formal qualifications. If the data is missing, it means that the member of staff may hold a PhD.

One theme is more sociological, the other more experiential/psychological. Within these themes, there are a number of research projects, which judging from their titles, are well conceived and interesting.

These research groups obviously have their main base in the subunit. An additional research group is mentioned, with interdisciplinary research on masculinity. This research group is shared with, among others, Gender Studies and History. No effort is made to explain how many researchers from this subunit take part in that research group and what their contributions are to the research. However, in the list of research projects there is a project on the music of boys, and one on military musicians (supposedly a male field historically). According to the self-evaluation, there has been a conscious leadership strategy to develop the volume of publications. Regular meetings are held among the senior researchers.

Scientific and Social Interaction

The bibliometric data is too limited to identify international networks. The registered articles are not co-authored with international collaborators. The self-evaluation stresses the subunit's international cooperation, especially in the research environment "Music and human beings". International cooperation is visible in the listed current research projects and they also self-report active engagement in international journals, editing and research collaboration with the University of Cambridge and the University of Delaware. Members of the subunit are keynote speakers, faculty examiners, and experts in an international context. In summary, this seems satisfactory.

The bibliometric data is too limited to identify national networks, and this aspect is not elaborated in the self-evaluation. The low degree of such interaction is probably due to lack of awareness: Their existence is not yet so well known in other universities.

The subunit act as consultants to the Swedish National Agency for Education and local councils. They also hold media presentations and popular science lectures, but the societal interaction can obviously be expanded.

Future Potential

The bibliometric data indicates a positive trend and some international impact. There is a relatively large publication volume on level 2 (Norwegian model), and a good publication volume for a small group. The overall vitality score is 1.25, that is, they are up-to-date. The area is of great interest and there is a possibility of developing a leading position.

One of the two professors is nearing retirement age, possibly in the near future. Given the generally low degree of academic competence in relation to the number of staff, it is important that a new professor is secured. There is no immediate generation shift. The research activity seems to be connected to a few key members of staff. Few of the senior lecturers have research activity, but several of them are publishing.

Summary and Recommendations

- It is a subunit with a low proportion of graduated staff, but with reasonable achievements. There is a good publication volume with some international impact.
- There are some staff members with a high production rate, but there are only a few with research activity. The didactical or educational perspective is a strong theme. The subunit as a whole has a strong potential for establishing a unique national position if resources are increased to enable research time for the senior lecturers and to increase the number of staff with PhD awards. It is necessary to find means to consolidate the achievements. Even a small subunit can be a large environment within a field that is not very developed. In terms of the direction of interest, there seems to be a good strategy in place. The overall recommendation is to continue on that path.

See Annex G for comment on the didactic research in this subunit.

Overall Grade: 3

Rhetoric

First Rapporteur: Peter van den Besselaar

Second Rapporteur: Gudrun Dahl

Quality of Research

This is a very small group where only three persons have publications registered in the bibliometric data. One of the researchers has a high DiVA score, but it is low for the other two. The professor thus has a good comparable publication record of 2.5 credits in the DiVA system. She also has one publication (out of 16) marked as in a high-rating journal. The senior lecturers have more limited publication rates (0.2 – 0.3) and no high-rating ones. There are no articles registered in the Web of Science data. The total publication score is 1, thus exactly average compared to other Swedish researchers in the field. The performance of the professor is okay, but as a subunit it is low. It does not live up to the historically good production of the group and the trend has been downward.

The topics related to crisis communication are certainly very socially relevant. Unfortunately, the self-evaluation did not indicate some results and examples of contributions. There has also been research on the history of the education in rhetoric. However, given that the Teacher Education Board has asked for priority for studies on subject didactics, one would think that there could be more space for the didactics of teaching rhetoric and also of studies dealing with the use of rhetoric in teaching other subjects. The main topic is international. Thus there is a possibility for international journal publications and impact – but this opportunity is not seized.

Research Environment and Infrastructure

There is only 1 full-time equivalent for research in 2014, to be compared with a total Field Adjusted Production score for the subunit of 3.3. The professor has in three years never had more than 0.4 of full-time equivalent for research. [*Editors' comment:* The supplied material contained an error, and the professor has had 0.7 of full-time equivalent for research each year of the evaluation period.] As an independent research unit, this is far too small.

The information is somewhat contradictory, but it appears that the academic staff consists of three people with an academic degree and three lecturers without a degree. The latter is problematic in a university environment.

It is mentioned that there are five or six PhD students (in some case the PhD student is also employed as a junior lecturer). Two PhD students have graduated from the subunit during the evaluation period.

External research funding is secured from the Swedish Civil Contingencies Agency and the Swedish Research Council.

As stated in relation to the subunit Language Studies, the organisational set-up is somewhat confusing. Rhetoric has been merged with Swedish, Literature Studies and possibly English under the heading Language Studies. In that context, the interdisciplinary research group/environment Narration, Life & Meaning is not mentioned in the self-evaluation by Rhetoric. The focus there is instead on the Centre for Crisis Communication, together with Media and Communication Studies. This is the main focus of the professor's research. Given this focus, to merge rhetoric with the weak subunit of language rather than with the strong media studies appears as an odd choice.

The evaluators wonder why there is no research group in didactics, when more research in this area is asked for by the Teacher Education Board.

The large number of projects (about a dozen) gives a far too scattered impression with only three researchers, and suggests a lack of leadership.

Scientific and Social Interaction

Since 2004, research and teaching collaboration exists with Stanford and research collaboration with Pennsylvania State University. A new collaboration with Bochum University has started. In 2012, the subunit arranged an international conference on crisis communication. Collaboration with South Africa resulted in a jointly published book. The international involvement of the subunit is quite satisfactory. However, one wonders why this has not resulted in more visibility in international journals.

Apart from internal collaboration at Örebro University, collaboration in national networks is not visible in the self-evaluation, which states the aim of becoming a national centre. It does not specify any such achievements yet.

Some of the research results have, according to the self-evaluation, been transformed into handbooks for crisis management. The subunit claims a societal impact, but does not provide any examples to substantiate the claim. More forceful efforts to make the work noticed might be possible and profitable, as this is a field where there are financial sources for research.

Future Potential

There is currently no potential breakthrough for this subunit, however, integrated in the right environments there may be good opportunities to expand and secure a niche.

The recent merging may hamper future sustainability, as it does not seem to have been a wise choice. The professor is 60+ and thus approaching retirement. Given the very low resource base, sustainability is low. This all has to be reconsidered due to the recent organisational changes for the subunit.

Summary and Recommendations

This subunit no longer exists as a separate unit, so the evaluation panel decided to not give a score. The usefulness of merging with Language Studies is questioned. Present research fits better with Media Communication Studies. Research in Rhetoric could also give an important contribution to didactics, but this depends on how Örebro University decides to organise subject didactics in the future. See Annex G for comment on the didactic research in this subunit.

Overall Grade: None given

Communication, Culture and Diversity

First Rapporteur: Gudrun Dahl

Second Rapporteur: Kenneth Nordgren

Quality of Research

The bibliographical information from the subunit pertains only to two people, one professor and head of the subunit and one post-doc lecturer. The available time for research tied to this subunit in 2014 is only 0.7 full-time equivalents. The subunit is given a score of 2.5 in Field Adjusted Production in the Web of Science data, with the two researchers each contributing half. Considering the little time available, this is a good achievement. In the self-evaluation, the professor expresses dissatisfaction with the Web of Science rating. Consulting the recorded publications in DiVA, it has to be admitted that she is right in her complaint, because she comes through as a very prolific and diligent academic writer. However, there are few high-ranking publications. According to DiVA, there are five publications on level 2 and 23 on level 1. The citation rates of both the listed researchers are Top 50%.

There is a counterclaim from the subunit Education as to where the lecturer's publications should be counted. The contribution is in any case relatively limited, but this raises the question on what basis members of staff are ascribed to different subunits in this evaluation. Contributions of the more loosely attached PhD students have not been included. It appears that the PhD degrees to which the subunit has contributed are not credited to the subunit, but with other subunits and sometimes with other universities.

The originality and relevance of the research cannot be judged from the provided information. From the titles found in DiVA, the material appears very relevant to the overarching topic of educational communication in multilingual situations. It is the opinion of the evaluators that the quality of the research cannot be judged neither from the rate of citations nor from these titles, but only from a first-hand peer review.

On the other hand, the title of the subunit does not appear to match the content of the research. It appears to deal with the intersection of the three concepts communication, culture and diversity, but mainly in situations of education. Therefore, it is not a research unit dealing with the diversity of culture as such, but rather has an emphasis that otherwise could be classified as special education and sometimes as disability studies. If one instead considers the titles of current research projects and research groups, the dominating themes are somewhat broader but still socially relevant. However, their significance could be a question of how well the research efforts (beyond the research schools) are related to other disciplines and research groups. Potentially, there could be an original theoretical contribution to areas of language, history education, information technology, and communication.

Research Environment and Infrastructure

The organisation of the subunit is not described in a way that makes the many themes and the interdisciplinary network comprehensible. This form of evaluation can be of disadvantage for a network. The subunit is described as a network and a platform. As a research environment, five themes are stressed of which two are claimed to be internationally strong profiles. (Deaf studies is one of them.) However, it is not clear which of the themes is to be found in which research group(s) and with what research projects, more than possibly as an aspect of intersectionality. There are five additional research groups. The theoretical sociocultural/postcolonial approach seems to be holding the projects together.

The subunit appears more or less as a one-woman show, with one professor to which a lecturer is adjoined. It has not been given any extra faculty support, but scrape along mainly on external support for various network activities, particularly research schools.

The professor is, according to the website, also research leader at the Centre for Rehabilitation Research at Örebro University Hospital. The website also adds two “coordinators” who appear to be PhD students on their way to finish. To this is added a “docent” working at Lund University and limited number of PhD students. Two PhD students are affiliated and work at Dalarna University and two are linked to a project and the research school (Doing Identity in and through Multilingual Literacy Practices, DiMUL, and Literacy, Multilingualism and Cultural Practices in Contemporary Society, LIMCUL, respectively). These researchers, however, do not appear to be financed through the subunit or, except in a couple of cases, get their degrees from Örebro University. No PhD students are listed in the overview background material.

The self-evaluation underlines that the subunit is a network-based research group with an unclear organisational position at Örebro University, and not a “mainstream unit”. The organisation of the network is not clearly described. If it is a network, it should benefit the university as a whole, but this appears not to be the case. In the self-evaluation, the subunit claims to be a strong network, but this is not obvious from the supplied information: the few high-ranked publications, the low number of staff, and the external funding.

It is difficult for the external observers to understand why it is then treated as a subunit at the same level as other subunits and not joined with e.g. that of Education. This would be a natural step if one considers the content, suggested by program and publication titles, rather than the lofty and rather vague description of the subunit’s research focus.

Furthermore, the self-evaluation presents five different “research groups” and nine different “research projects”. However, considering that the academic staff consists of two persons, having 0.7 of full-time equivalent to spend, this would appear to be a gross exaggeration. In several cases the only name that is listed as a member is the professor/head of the subunit. This may be an unfair reading, but the supplied material does not say anything about the number or identity of the group members. The listed themes are interesting, but the question remains whether they match the overarching title of the subunit or whether they could not be attached to other research groups or environments at the university (for example Relations for Youth, the Swedish Institute for Disability Research, Gender Studies). Such links perhaps exist but are not presented here. Also, they should probably be defined as “research themes” rather than “research groups”. When evaluating resources at the subunit’s disposal, the difference between a “theme” and a “group” is significant.

Part of the work of this subunit relates to four “research schools” or platforms. One of these is a national research school, led by the professor, and the title of which is close to the title of the subunit: “Literacy, Multilingualism and Cultural Practices in Contemporary Society” (LIMCUL). The three others have names that less obviously link to the stated focus of the subunit: “Didactics”, “Participatory research”, and “Technology-based Knowledge Processes” (with its basis in Informatics).

The general impression of the research focus of the subunit is that it is not a focus but instead a rather eclectic assemblage of research directions. In the best case, if this corresponds to an intensive involvement in a broad range of activities at different units, it might be invigorating and inspiring to the whole faculty. In the worst case – which is perhaps more likely – it spreads limited resources too thinly and not providing a coherent contribution.

Scientific and Social Interaction

The self-evaluation describes a high degree of international collaboration, mainly in relation to conferences. The professor must be said to have a satisfactory activity of taking part in international conferences, and also in initiating conferences arranged by the subunit. The bibliometric data is too limited to identify international networks. There are no internationally co-authored articles registered in the data.

Collaboration on a national level is a prominent feature of the subunit, which lists four “research schools”. The research school directed by the professor has acquired 13 million SEK from the Swedish Research Council. It is not possible to see from the supplied information if this implies that the subunit has teaching engagements at other universities, nor the extent of exchanges of PhD students. Neither is it clear how many PhD students from other subunits at Örebro University take part, nor whether the research schools are funding any PhD students at all. There is no information given on how long these programmes will last, whether they are about to be phased out, or have essentially already been so.

Within one project (CIC), the professor collaborates with Dalarna University, writing conference presentations together with a researcher in Falun. In another project (CINLE) she collaborates with the head of teacher education at Dalarna University, and the former Director of Studies for the now terminated Doctoral School of Educational Science (LINCSD-SEES) at Gothenburg University. The bibliometric data is too limited to identify national networks.

In terms of societal interaction, the self-evaluation reports on collaboration with external partners, like national school and cultural authorities and the National Institute of the Hearing Handicap in Mumbai.

In Sweden, the subunit is collaborating with different theatres in a dialogue project called Participation and Theatre (DoT), which is funded by the Ministry of Culture. The subunit is also involved in development cooperation on capacity building and in work with hearing impairment in India.

Future Potential

The vitality score is below average. The bibliometric data shows a relatively large volume, but only a few on level 2 (Norwegian model). The ORU Database Information indicates no external funding from 2014. The data on academic staff registers two researchers and hence, this is not a research environment. The data is insufficient to evaluate future potential.

If the subunit is relying on external funding, the sustainability seems problematic. The subunit is far too dependent on one person to appear sustainable in the long run. It nevertheless appears essential that the university takes care of the leader as a very productive researcher, but also ensures that her networking activities benefit other subunits within the School of Humanities and Social Sciences.

Summary and Recommendations

It is a very small subunit without a coherent profile. Its leader is productive in terms of quantity, while the quality is difficult to judge from the supplied material. It is not clear which the present collaborators are and on what premises. The listed research projects are mainly in collaboration with Education. It is difficult to see why it is given a separate status as a subunit when it hardly represents any “group” of permanency. Its general character does not motivate that it is given a score as a research subunit on the same principles as other evaluated units, a problem that reflects back on the leadership of the faculty.

The network activities could have been evaluated for their contribution to the university’s net of contacts (on a national and international level) and for how this benefits the university (as a whole and particular institutions and subunits). This would have required more substantial information and also information of a different type.

Taking this into consideration, the panel agreed not to give any mark.

- The position of Communication, Culture and Diversity at Örebro University has to be clarified, both in relation to organisation and resources and to its future mission.
- An organisational overview should look in to the relation between the subunit and Education.
- A research network with themes closely related to other disciplines and with a strong theoretical orientation could both contribute to and benefit from a closer relationship with relevant disciplines at Örebro University.

See Annex G for comment on the didactic research in this subunit.

Overall Grade: None given

Education

First Rapporteur: Kenneth Nordgren

Second Rapporteur: Kimmo Nuotio

Quality of Research

In the bibliometric data there is some information from Web of Science, but Education is better covered from DiVA and the Norwegian model. In DiVA there is a quite large volume of publications (75). Twelve are registered on level 2 (Norwegian model). Fifty-five papers are written by two professors and one associate professor. According to the self-evaluation the newly recruited professor is not counted correctly. Of the academic staff, nine out of 19 have publications registered in the bibliometric data. The collective sum of public points is quite low, according to DiVA, however, the individual scores of the professors are above average. Citations per paper (2.2) and the normalised score categories indicate that there is no international breakthrough.

Education at Örebro University is a well-known research environment. It has in later years broadened its focus, and gained successes in the field of sustainable development. Recruitment indicates that research on assessment issues will become an important field.

Research Environment and Infrastructure

Education is a relatively large subunit. Four professors, one associated professor, 15 senior lecturers and seven PhD students. The subunit has several sources of external funding. There are several environments and additional research groups. There seems to be coherence around a pedagogical approach to meaning-making and preconditions. The research environment “Education and democracy” stresses the importance of their journal, which was founded in 1992. The doctoral education is very strong and acquires research funding from the European Commission.

There has been a generation shift that seems to have been quite successful. There is thus little discussion in the self-evaluation about weaknesses and how to address them. There are main goals, but not so much discussion on strategy. However, there is self-awareness about the need to strengthen international publications.

Scientific and Social Interaction

The bibliometric data only indicates a few co-authored articles with international collaborators and few connections to non-Swedish universities. There seems to be some collaboration, but the volume of publications is far too low to say more about it. The self-evaluation mentions leading positions in European networks and internationalisation is stated as a prioritised aim.

The bibliometric data indicates frequent collaboration within Örebro University, and regular collaboration with Uppsala University. The ORU Database Information describes the research groups, the research environments and indicate an interdisciplinary network, but mainly within the university.

As regards societal interactions, there is cooperation with the National Agency for Education and the School Inspectorate. One professor is active on social media.

Future Potential

The bibliometric data indicates that there is a long way to go before reaching any international breakthrough. It will be important to publish more through publishers that are listed higher in the relevant rankings.

The subunit's main strength is also an important weakness: The milieu is dependent on a few highly productive key members of staff, which makes it vulnerable. It should, however, be taken into account that the environment is recovering from a recent generation shift. There is continuity in external funding and rebuilding is under way.

Summary and Recommendations

Individual researchers have a good publication volume, but with less international impact. There is continuity in external funding. The obvious recommendation is to formulate a strategy for increasing publications with higher ranking and to strengthen the opportunities of the senior lecturers to be involved in research activities. A further question to consider is if and how the subunit could be developed to contribute to a milieu of subject-didactical research at Örebro University. There is a need to support researchers and PhD students who are quite alone in their disciplines, but the focus and traditions within Education is not primarily oriented in this direction. A recommendation is to investigate how Education could support such an environment. See Annex G for comment on the didactic research in this subunit.

Overall Grade: 2

Gender Studies

First Rapporteur: Gudrun Dahl

Second Rapporteur: Peter van den Besselaar

Quality of Research

Output in terms of international journal articles is not high, and the impact of these publications is on average weak. A few researchers have a good impact score, but only with a small number of papers. The overall relative DiVA productivity is just above the average (1.1). A couple of researchers have a much higher productivity than the others, both with publications registered in Web of Science and in DiVA: one post-doc researcher and, in particular, one guest professor. The guest professor is close to retirement and is also affiliated to other institutions. The guest professor is responsible for two third of all publications (in WoS and in DiVA). The subunit faces a productivity and impact problem since the majority of researchers scores less than half the average value.

Only three PhD degrees have been awarded during the period 2008-2014. It is a surprisingly low number given the subunit's success in gaining external funding and its involvement in graduate teaching.

The research projects focus on highly salient social problems and on relevant themes for policy. Gender inequality, in various domains, remains an important issue.

Significance and originality of the research is difficult to assess, as the supplied material describes topics and some of the questions, but no results. What were the interesting findings that bring the research field further?

Research Environment and Infrastructure

There is only one permanent professor, approaching retirement within the next five years. Only a few staff members appear to lack a PhD degree. Research resources seem relatively low, but have gone up in the last three years from five full-time equivalents, to seven and then to around ten. Overall, with ten full-time equivalents it is possible to do considerable amounts of research. Many of the staff members do not have much research time, which may affect the sustainability of the research environment.

The subunit has been successful in getting financial support from the Swedish Research Council, from Vinnova and from the EU. It has got faculty support for a post-doctoral research fellow.

The subunit consists of ten research groups, which is the same number as there are (senior) staff. In terms of effective research groups, this seems by far too small. At least three groups are focusing on intersectionality and inequality; why not merge these? A merge may improve collaboration, output and impact, and would support leadership. The program consists of some 30 projects. This implies that the overall capacity per project is 0.3 full-time equivalents, which hinders progress and may explain the relatively low output. It also may hinder leadership. It is unclear if others from outside the subunit participate in these groups. The average age of the permanent staff is about 64, and several of them seem not to publish any more. Also the professors approach retirement age (on average 68 years old).

The subunit claims to be the core of the interdisciplinary Centre for Feminist Social Studies (CFS), comprising 20 senior scholars also from Sociology, Social Work, and Political Science. The centre offers doctoral level courses and is a running research seminar. The exact role of the subunit remains unclear. The self-evaluation does not make clear how the multidisciplinary

collaboration is productive for the research, and interdisciplinarity is also not reflected in the bibliometric data for the Gender Studies⁷.

Scientific and Social Interaction

The self-evaluation mentions strong international composition of staff, participation in international networks, and in conferences and editorial boards. This, however, is not reflected in the bibliometric data or in the DiVA data: If there was much international output outside of Web of Science, one would expect higher numbers in DiVA. The bibliometric data shows that the international collaboration is reasonable for some of the researchers, but low for others.

Apart from local collaboration, the subunit is part of a Swedish consortium of gender-specialised research units (with Karlstad University and Linköping University). The question remains that if this networking is useful and effective, why is this not visible in e.g. DiVA data?

The interaction with societal stakeholders is (self-) reported to be strong. It is also reported that there is a strong relevance for Swedish and EU gender policies, but unfortunately there is a lack of concrete examples.

Future Potential

The vitality score is just average. The production of the subunit depends heavily on one person. The permanent staff is small and facing retirement. This is a problem and an opportunity: If the university is able to attract high quality researchers at professor position, then this may create a viable environment. Potential breakthrough (on an international level) is problematic in the current structure. That would require improved productivity and impact.

The sustainability needs attention, given the age structure of the subunit.

Summary and recommendation

In terms of output and impact the subunit is weak and highly dependent on one person. It would be very important to appoint two young full professors with *high* (in terms of international standards) past performance in publications, impact, and attracting funding. Given the age structure of the subunit this is a feasible strategy.

Overall Grade: 2

⁷ In terms of the cognitive network (see the bibliometric report), members of the subunit with international journal publications are similar to each other.

Human Geography

First Rapporteur: Katarina Eckerberg

Second Rapporteur: Lars Hassel

Quality of Research

This discipline was established at Örebro University in 2003, at which time a full professor was appointed and the PhD programme started. The group has remained small, with a total of only five faculty members. Two interrelated themes are included in the research group Urban and Regional Development: (i) regional/local development and (ii) urban planning issues. The access to a comprehensive longitudinal micro level database, which is updated every third year, allows for quantitative analyses. The bibliometric analysis confirms low productivity, with only three higher impact papers. The subunit also scores low based on the data registered in DiVA.

In addition to the above-mentioned research, the researchers from the subunit are involved in two interdisciplinary constellations at the university:

(A) The Centre for Urban and Regional Studies (CUREs) involves 43 researchers in such various fields as Architecture, Biology, History, Human Geography, Media and Communication Studies, Public Health Science, Political Science, and Sociology. Tied to this was the Research School Urban and Regional Studies, with about 24 PhD students. Research topics of CUREs include (i) Regions of growth and stagnation; (ii) Place and identity; (iii) Urban development and place-making; (iv) Governance, networks and democracy; and (v) Environmental regulation and planning. Several of the topics thus overlap with the subunit's own Urban and Regional Development theme.

(B) The research network Social and Political Studies on Climate Change (SPSCC) is dedicated to the study of social and political dimensions of climate change, involving researchers from Education, Ethics, Human Geography, Media and Communication Studies, Political Science, Psychology, and Sociology. SPSCC arranges regular seminars with invited researchers and practitioners. This seems to be a looser network compared to (A).

We note that all the research themes carried out by researchers at this subunit are considered highly relevant for society. Attention is given to topics initiated by the Swedish Research Council Formas, EU Horizon and, to some extent, the Bank of Sweden Tercentenary Foundation, the Swedish Energy Agency and the Swedish Environmental Protection Agency. The group should make further efforts to apply for research funding from the above sources in collaboration with others.

Research Environment and Infrastructure

As already noted, the group is very small, with one professor and four lecturers/researchers of whom only two are allocated research time. The subunit relies heavily on networks with others (see A and B above). In the past five years, as many as eight PhD students have graduated in Human Geography but no PhD student is currently enrolled. From the figures, which are lumped together for the entire School of Humanities, Education and Social Sciences, we cannot determine what funding this research group has acquired in the past, but there is no external funding body listed from 2014 to the present.

With only three persons appearing in the publication list, this research unit is highly vulnerable to faculty turnover. The lack of PhD students is noteworthy. The organisation of collaboration with others is, however, commendable.

Scientific and Social Interaction

International collaboration and co-authoring is less frequent at the present moment for the subunit. Internationalisation has come from international publications and faculty attending international conferences. International interaction could be strengthened.

On a national level, cooperation and co-authoring takes place internally with colleagues at CUREs and externally with colleagues from Dalarna University. PhD students and research projects on labour mobility and career paths in the tourism industry are national. Research funding comes from regional cooperation.

The societal interactions consist of collaborations with external organisations in urban planning research (e.g. research funded by the municipal housing company, ÖBO) and in local/regional development (e.g. with a project developing heritage tourism in Bergslagen). However, it is a small subunit that demonstrates little external collaborations.

Future Potential

The research unit is too small and the vitality low. It would benefit from merging with Political Science and Sociology, where collaborations already exist through CUREs and SPSCC. It is a problem for the future that there are currently no PhD students enrolled, and due to limited faculty support, the subunit is very vulnerable to turnovers. In 2015/2016 new bachelor and master programmes in planning and sustainable development will start. These themes are directly related to ongoing research and may potentially add new young competence in research.

In terms of sustainability, this is a very vulnerable research group that depends upon cooperation with others (see above). Future potential comes from merging with related research units.

Summary and Recommendations

The overall score for Human Geography is 2. The international impact of this small subunit appears low, but with some potential regional impact. The group needs to increase its publishing in international outlets, and should widen its research networks. The group should apply for research funding to support the interdisciplinary themes. Special action is needed to address the issue of recruiting new PhD students. Research and PhD education could be strengthened with an organisational change.

Overall Grade: 2

Political Science

First Rapporteur: Katarina Eckerberg

Second Rapporteur: Kimmo Nuotio

Quality of Research

The research topics in Political Science include aspects of democratic theory and practice, policy change in key and novel policy fields, public-private partnerships, and roles and relations between politicians and public officials. The publication outputs are moderate, with a good impact and a good share of top 5 % cited papers, but in DiVA the subunit's scores are weak (about 20 % below Swedish average). Yet these figures should be viewed in light of the recent generation shift in this subunit (see further comments below). The department has produced some 20 PhDs in the five-year period, of which as many as seven in 2014, but the formerly quite large group of PhD students has now rapidly declined.

Three themes are pursued, of which one is central to political science: (i) studies of new challenges and possibilities of democratic governance in collaboration with governments, (ii) public agencies and (iii) citizen organisations within the Center for Democratic Government in Change (DGc).

Three subgroups are contained within DGc: (i) Civic engagement and political participation; (ii) Policy and planning processes; and (iii) Political institutions. Collaboration also takes place with colleagues from other disciplines in the above-described (under Human Geography) two interdisciplinary research groups Centre for Urban and Regional Studies (CUREs) and Social and Political Studies on Climate Change (SPSCC). The subunit also connects also to Youth & Society and to Education and Democracy.

The research topics have high societal relevance and are rather traditional within the discipline. Originality within political science lies particularly in the interdisciplinary policy studies of environment and climate change, safety and urban planning.

Research Environment and Infrastructure

The academic staff consists of two full professors (of which one is faculty-funded), five senior lecturers, three post-doc/researchers and three PhD students. Half of the staff are on fixed-term contracts and several are recently hired. With such limited personnel, it appears as if the division into so many research subthemes is not needed, especially since many of the themes are overlapping. It is noted that there are many ongoing research projects listed, but those are not divided into the above themes, which indicates that the themes are perhaps already merged in practice. Research funding is considerable and well spread, including more prestigious grants from The Bank of Sweden Tercentenary Foundation, The Royal Swedish Academy of Letters, History and Antiquities, The Swedish National Agency for Education, the Swedish Research Council (VR) and the Swedish Research Council Formas. The subunit's efforts to acquire external research funding should be praised.

Leadership competence is available with the two professors, and the structure of research seems to be rather well-thought-out. Nevertheless, as mentioned, the many topics of research appear too thinly spread given the small size of the research unit. It could benefit from an organisational merge with Sociology and Human Geography, where Sociology could lead the way in strategic work to increase research visibility and productivity.

Scientific and Social Interaction

The self-evaluation gives a rather optimistic picture as concerns international collaboration and publication strategy, but there is not much evidence of international networking and collaboration other than ‘normal’ participation in international conferences and publication in international outlets. It might perhaps be that some of the listed research projects are quite new and have not yet resulted in international publications. Only three papers have been co-authored with international partners over the five-year period (with Teheran University, Tampere University and Bergen University).

On a national level, collaboration is pursued largely within Örebro University with a few other national collaborations, according to the bibliometric report.

Societal interaction seems to take place through several of the research themes, which are highly relevant and topical for society at large.

Future Potential

The department has quite recently gone through a generation shift, where several professors have retired, and most former PhD students graduated. Two new faculty-funded professors have been hired and several young researchers on fixed-term contracts. Hence, the vitality is high. To allow for breakthrough there is, however, a need to revisit the thematic coherence and concentrate future efforts on viable research, with focus on the strengths of the current staff.

The research group is now rather small, but has been very successful in attracting external funding. There is a need to ensure that especially the member of staff with the highest productivity is secured a permanent contract and allowed sufficient research time in the future. Special action to increase the number of PhD students is also recommended.

Summary and Recommendations

It should be noted that only five of the current staff show up in the bibliometric study which might be explained by the recent generation shift. There is need to reconsider the foci of the themes, international collaboration and publication strategy. The research subunit is very small, which suggests that it could benefit from merging with adjacent disciplines. With half of the staff being on fixed-term contracts, the sustainability of the subunit needs to be safeguarded. See Annex G for comment on the didactic research in this subunit.

Overall Grade: 3

Sociology

First Rapporteur: Katarina Eckerberg

Second Rapporteur: Ingalill Rahm Hallberg

Quality of Research

The research in sociology is organised within three main areas: (i) Working life and organisations, (ii) Family and close relationships, and (iii) Environmental sociology. In addition, the subunit collaborates in the FamForsk interdisciplinary research group with around fifteen (15) PhD students. Much research in sociology also takes place in the two interdisciplinary centres: Centre for Urban and Regional Studies (CUREs) and Social and Political Studies on Climate Change (SPSCC) (described earlier for Human Geography). However, the specific contribution from sociology to FamForsk, CUREs and SPSCC is not described. It seems as if both FamForsk and SPSCC function as research networks rather than well-organised research groups. The research groups and themes are depicted to cover very broad issues which constitutes a challenge with the limited resources available.

The scientific output is good considering that sociology has traditionally not gone for international peer reviewed journals (24 papers over the 5-year period). The international publishing is moderate but increasing, which is also explained as part of a strategic process in the self-evaluation. The publications have very good citation impact and excellent share in top papers (8.4 % belong to the Top 5 %). From the perspective of individual researchers, one is reported to belong to Top 5 % and two more to the Top 10 %. (In total, eleven researchers are listed in the bibliometric report). In DiVA, however, the subunit has weak scores (30 % below the national average), indicating a varied publication record among the researchers. The publication volume and patterns thus vary greatly between the three research areas, and the overall moderate productivity constitutes a potential risk. The publication profile indicates that publications are gathered around the theme of risk and environment research. The self-evaluation argues that the full potential of internal collaboration is not yet realised (and hence not visible in the bibliometric analysis), because of recent recruitments. Yet, the interdisciplinary collaboration is expected to pay off by co-authored articles. The list of research projects covers 14 projects indicating broader research activity. The sociology group stands out as having been successful in obtaining grants from national research funding bodies.

All three research areas contain highly relevant issues, both for society at large and within sociology. Significance could be strengthened by concentrating on the most original research themes that are currently showing the highest productivity. Notably this can be found within CUREs, but there is also potential for originality in the FamForsk themes.

Research Environment and Infrastructure

The scientific competence is made up of four professors, one assistant professor, two post-doctoral researchers, one researcher, and three doctoral students along with eight senior lecturers, one lecturer, and one assistant lecturer. In all, 11 out of 20 persons report having research time for 2014 and in total that adds up to 8.7 of full-time equivalents. Thus the available resources are good, but not extensive bearing in mind the many projects and research groups.

For a few years the sociology group has developed a number of strategies to strengthen its impact: by consolidation of fewer research areas, internationalisation, and internal workshops for publications/applications. This is commendable. Since 2008, eight PhD students have graduated in sociology, but the current low number of PhD students is a problem and it challenges long term quality and robustness. Current external research funding appears considerable and comes from a range of sources, including highly prestigious ones: The Bank of Sweden Tercentenary Foundation, the Swedish Foundation for Strategic Environmental Research (Mistra), the Swedish Research Council (VR), the Swedish Research Council for

Health, Working Life and Welfare (FORTE/FAS), the Swedish Research Council Formas, and the Swedish Social Insurance Agency. There is however no information on who is the principal investigator in the funded projects.

The different research areas are led by the four professors (of which three are faculty-funded). The Environmental sociology section, currently involving eight researchers, appears to be the strongest among the three main themes.

Scientific and Social Interaction

The subunit's strategic work has paid off in terms of internationalisation: There is ongoing international cooperation documented in the bibliographic study with Bremen University, UFZ Helmholtz Centre Environment Resources and Wageningen University. It is noted that the Environmental sociology section organised an international conference at Örebro University in September 2015. There is however potential in further strengthening of international collaboration, not least in EU Horizon.

National collaboration is pursued particularly within the university, in the three interdisciplinary centres: FamForsk, CUREs and SPSCC. Furthermore, some external collaboration is visible with Stockholm University, Södertörn University, Umeå University and the Swedish University of Agricultural Sciences. Collaboration seems to be spurred by project funding and could be developed further.

There is no particular mention of societal interactions in the self-evaluation. It does, however, mention that there is great variation in how researchers communicate and collaborate with non-academic audiences, and that they have no joint strategy on this. This point would require further attention in light of the high societal relevance of the research themes.

Future Potential

The sociology research group has taken care to develop a strategy to meet future challenges, which is to be encouraged. Given the rather young staff, with as many as four professors, there is reason to believe that this group will succeed in increasing its international research impact in the near future, provided that they take further measures to support the core areas of expertise (particularly those relating to risk and environmental issues). The vitality score is average and should not constitute any problem.

The group is composed of quite young and medium-aged researchers who can be expected to make efforts to sustain the research at least in two of the thematic areas: Family and close relationships and Environmental sociology, while the third theme Working life and organisations seems more vulnerable.

Summary and Recommendations

The publication record is good, albeit somewhat uneven, but with some very good citation scores. The success in attracting external research funding is also noted. The research could benefit from focusing on questions not so commonly pursued by others in the field. Overall the research could be more coherent and specific, and presented in research programs rather than in projects where the contribution from sociology is clarified. Their research strategy is commendable and should continue to be implemented.

Overall Grade: 4

Criminology

First Rapporteur: Alexander von Eye

Second Rapporteur: Kimmo Nuotio

Quality of Research

The Centre for Criminological and Psychosocial Research (CAPS) is a relatively small research unit. It includes three researchers with permanent positions, one adjunct researcher, two doctoral students, and one research assistant. The research activities of the members of CAPS can be located on the interface of criminology, psychology, developmental science, and sociology. Both academic audiences and communities are targeted, as can be seen from the list of current projects.

Scientific Output and Quality

Given the small size of CAPS, the number of published papers is small. In fact, the number of papers per faculty staff with permanent positions (all of whom are charged with research) is no more than 1.15 per year, over the evaluation period. This number is even smaller if one considers adjunct faculty and doctoral students as possible contributors. At first sight, these numbers could be viewed as disappointing. Members of CAPS, in particular the professor and the associate professor, display a solid publication record in all domains that, as mentioned above, act on the interface of importance in Criminology.

The work done at the Criminology subunit is beyond reproach as regards significance, originality and relevance. Given their profile, defined by the interface of the disciplines, CAPS seems to have found and established its own niche. Particularly encouraging is the fact that the subunit conducts research on both the academic and the outreach level.

The profile of the research unit distinguishes itself to some extent from the more sociologically oriented criminology, which dominates the field in the Nordic countries. This has both its merits and its downsides.

Research Environment and Infrastructure

The scientific competence and coherence of the researchers are excellent. It is disturbing to read, however, that there is only minimal secretarial support and that there is only one research assistant. The work that is delivered is, nevertheless, of high quality.

Similarly, the researchers show impressive leadership by organising and being involved in so many research projects and by getting external funding.

Scientific and Social Interaction

The members of CAPS are very well connected, both nationally and internationally. One example is an edited volume (published in 2013), which illustrates a long-standing collaborative and collegial relationship with senior colleagues. It is an indicator of how well members of the CAPS are connected and how broadly they orient themselves. The research has wide international networks, at least on the topic of The Child Problematic Traits Inventory (CPTI), as reported on the website.

The research output has direct relevance to stakeholders in society. The research is cross-disciplinary, as it touches on studies in health, policing, and crime prevention.

Future Potential

The professor already has an international reputation as an outstanding researcher. He has a number of articles that have been cited more than 100 times, one of these approaches 200 citations. This indicates that the breakthrough has taken place already. Similarly, the associate professor has published a number of well-cited articles. Based on this success, one can expect this quality of work to continue. The work could certainly become more sustainable if the subunit was larger, if there were more PhD students, and if more members of CAPS were scholarly active.

Summary and Recommendations

Summary: A small, research-active and successful subunit.

Recommendation: To increase the number of research-active faculty staff and improve research support.

Overall Grade: 4

Legal Science

First Rapporteur: Kimmo Nuotio

Second Rapporteur: Katarina Eckerberg

Quality of Research

The provided bibliometric analysis from Web of Science does not cover Legal Science, but there is an overall score from DiVA. The production registered in DiVA is good (1.2) but 79 % of the papers are in the lower classification (level 1, Norwegian model). They have prestigious and substantive research funding from multiple sources. The publishing activities are not evenly divided amongst the staff members, and this may be due to the fact that some lecturers have very high teaching duties. The publishing activities give evidence of the fact that the scholars are internationally active. The publishing achieves, without a doubt, the Swedish national standard and, to some extent, even an international standard. The research is divided into a long list of research groups and themes of which European law, broadly understood, stands out as the strongest. The number of listed research projects is high.

Research Environment and Infrastructure

Legal Science at Örebro University is characterised by a setting in which scholars pursue their individual efforts and their research is only loosely organised in thematic research groups. This is rather typical of legal science in most European countries. However, it seems that the scholars have found a sufficient number of areas for joint interest in order to benefit from each other's experience and knowledge.

Scientific and Social Interaction

Legal science is orientated towards national research, even though the comparative European and international research frames are becoming increasingly important for the legal research. The researchers have international collaborations, although the main audience is national. Several individual scholars have established their own international research contacts, to serve their interests. It is also clear that the scholars are part of the national research network in law. They are, however, collaborating less with other fields and there should be potential in collaborating in the interdisciplinary research groups on e.g. family research, public health and medicine, criminal law, environment planning and climate change.

Future Potential

The age structure of the staff is rather good and the group seems stable as many have stayed on since they were recruited. The high quality research is dependent on leadership in the strongest research areas.

Summary and Recommendations

The research in Legal Science, which has a history of some ten years at the university, has clearly established itself. The senior scholars make a visible impact nationally and, some of them, even internationally. There is no reason to doubt the possibility of further progress. The self-evaluation gives a realistic picture of the current profile of research and describes its potential.

It seems that Legal Science as a scholarly activity has rather little to do with other disciplines at the university. Legal perspectives would be useful and highly relevant for studies in several of the current interdisciplinary research groups. Having said that, there could also be problems in forcing such collaboration, since it may be better to let legal scholarship develop according to individual preferences, logic, and expertise. Nevertheless, other fields of research should be aware that normative regulatory questions could be built into their framework. It may be recommended that legal scholars acquire more knowledge of research in other fields, with the possible long term outcome of a fruitful increase in multidisciplinary research.

The scholars need to continue publishing internationally, along with national publications, and to find an optimal balance. There is still room for publishing more internationally, especially on those areas where a European and international discussion is relevant.

Overall Grade: 3

Psychology / CHAMP

First Rapporteur: Alexander von Eye

Second Rapporteur: Anders Ekblom

Quality of Research

The Psychology research unit is among the best at Örebro University. In the Excellence Ranking that the Centre for Higher Education Development published in 2010, the Psychology research at Örebro University is among the 59 best in Europe, in the same league as Oxford, Cambridge, Munich, or Amsterdam. The subunit excels in particular in citations and teaching staff mobility (whatever that may mean). The department itself entertains two “broader research environments,” the Centre for Health and Medical Psychology (CHAMP), and the Centre for Developmental Research (CDR). The chair of CHAMP is a professor who specialises in pain research. The CDR is chaired by one professor working in the subunit of Youth & Society, and one professor in developmental psychology. The department covers projects in the areas of cognition, personality, mental illness, stress, pain, sleep, social anxiety, antisocial behaviour, criminality, psychopathy, social relationships (to peers, parents, etc.), peer networks, prevention, intervention, and several other areas (from the departmental web page). Strangely missing is a subunit on quantitative methods and statistics.

The subunit houses three professors, eight permanent senior lecturers, two permanent lecturers, and a number of fixed-term lecturers (of which two are senior), PhD students and two teaching assistants.

Scientific Output and Quality

Output has been constant and, to an extent, even increasing during the period with slightly above average quality measures. No matter how many articles and chapters are published by the scholars in Psychology, their success is beyond reproach. One of the professors has on his own published a number of citations classics. He has 22 papers that have been cited in excess of 100 times, one of these approaching 400 citations, and another one approaching 1400 citations. The second professor has far fewer papers to her credit, but the portion of articles that have been cited more than 100 times is higher. The record of the third professor is less outstanding, but still respectable.

Research Environment and Infrastructure

The scientific competence and coherence of the researchers seem excellent. One wonders why the Youth & Society unit is being run separately (which usually results in an increased administrative burden and costs), but members of the department collaborate in projects. The number of projects conducted is reasonably large. Funding is secured from the important sources in Sweden.

Scientific and Social Interaction

The senior members of the subunit are very well connected, both nationally and internationally. There is an outstanding track record of international collaborations, with creative ways to make it happen.

In the context of pain research, the panel members had expected collaboration with medicine and nursing. In addition, it was noted that the split of Psychology from Youth & Society gives the impression of being somewhat artificial.

Future Potential

As far as the subunit's potential to carry on into the future, there is a certain degree of uncertainty. The three professors listed in the report are in the prime of their careers and can carry the reputation of the department for years to come. As mentioned above, research competence specifically on quantitative methods and statistics was missed. Larger research projects in the social and empirical sciences are experiencing an increasingly harder time getting funded without solid statistical support.

Summary and Recommendations

Summary: A very research-active and outstandingly successful subunit.

Recommendation: Increase the number of research-active faculty staff. In particular, start a subunit on quantitative methods and statistics.

Overall Grade: 4

Social Work

First Rapporteur: Gudrun Dahl

Second Rapporteur: Ingalill Rahm Hallberg

Quality of Research

The Social Work subunit has been in place since 2012, which makes the evaluation period very short with an impact on reliability. [*Editors' comment:* This is a misunderstanding since the discipline has been in place at Örebro University, and the prior Örebro University College, for about 50 years. However, it was initially mainly concerned with education.] The scientific output is made up of eight publications and the citation score is below average. The nine listed researchers of the subunit have low scores throughout in comparative productivity: Seven of them range from 0.1 to 0.7. Only one person, a senior lecturer, has a publication score above the average (1.2). The overall score is 0.4 of the national average. All individual Field Adjusted Production scores are below 0.8 and the total score is 3.6. All in all, the subunit has 6.25 full-time equivalents for doing research, the three PhD students included, and disregarding the guaranteed 20 % for development of professional competence. Hence, the productivity is low even compared with the actual time available. For citations, the bibliometric analysis with 12 listed researchers note two with a Top 50 % score. Five researchers have scores below the 50th percentile. About 38 % of the publications have not been cited.

However, the publication track record is improving. The vitality score is above average. The last two years show an increase in productivity and the strategy outlined in the self-evaluation indicates an awareness about how to develop and become more competitive. The selection of journals in which the researchers plan to publish can perhaps be improved further, with less focus on European journals and more on international publishers.

The research is organised into three research groups. In addition there is involvement in the group Critical Studies on Men and Masculinity. Twenty-one projects are listed, which seem a lot bearing in mind the limited number of researchers and their combined research time.

Significance originality and relevance

In particular two groups stand out as providing significant and original research: (i) the research about bullying adults in schools and (ii) the research on dealing with children with parents in prison and relations for youth (RELY). These themes stand out as timely and societally very important and with the potential to form a profile for Örebro University. The work of the research group on young people's relations is also used as a basis of support for teachers.

Research Environment and Infrastructure

The list of staff from the Primula comprises 32 persons of which 11 report the year of acquiring their PhD award, including two professors. There are three PhD students listed. Thus the scientific competence is limited, as well as the time for research. Two of the research groups stand out as original. It is not clear why they are separate, instead of forming one group (bullying and relations for youth). For the third group, Social Work, the organisation and conditions are somewhat unclear. The description of the internal structure makes sense and is seemingly well-thought-out.

The subunit has access to two professors, nine senior lecturers, but also 16 lecturers apparently without a PhD award⁸. This is an alarming low rate of teachers with a PhD award at a university department and the department would be recommended to set up a programme allowing more teachers to acquire a PhD award. Serious thought should also be given to how

⁸ *Editors' comment:* During the meeting it was clarified to the panel that for some of the academic staff, particularly if they got their PhD abroad, there may be no record at Örebro University of their formal qualifications. If the data is missing, it means that the member of staff may hold a PhD.

the guaranteed 20 % of work time intended for professional development can be organised in an efficient way to enhance research qualifications of the staff.

The three research groups, (i) Bullying as a social phenomenon and problem area, (ii) RELations for Youth, and (iii) Social Work – Organization and Conditions are, according to the self-evaluation, newly formed. These three groups appear to be mainly based at the subunit, while an additional group, Critical Studies on Men and Masculinities, is linked to the Centre for Feminist Social Studies. It is very difficult to see from the material who takes part in which group and with what productivity as a result. One would, for example, have liked to see more concretely what social work's take on masculinity is. Also, one would have liked to know whether there is cooperation with other subunits or research environments dealing with bullying and harassment. It is not possible to discern any traces of such collaborations from the supplied material by Social Work and Youth & Society, which certainly would have been sensible.

Scientific and Social Interaction

In the self-evaluation it is stated that “[a]ll our three research groups have international network collaborations that, in addition to published articles, have resulted in articles in press and published chapters in international anthologies and reports for governmental information and international policy and practice development”. We have here only to accept the statement of the subunit, since there are no closer specifications. However, it is evident that there is ongoing international collaboration and an awareness that it has to be developed further. The role of this international collaboration is, however, not clear.

On a national level the subunit offers no specification of their collaborations. Given that social work is a discipline with a substantially longer tradition at other Swedish universities [Please note Editors' comment above], such cooperation would appear desirable.

Societal Interactions

The self-evaluation argues (without more specific explanations) that “[t]he group has long experience of and well built-up permanent channels for collaboration with the professional field (employers as well as professionals).” Public lectures for professionals, clients/users and interest organisations are mentioned. It is evident that this collaboration is usually focused to local areas. Two of the research themes are heavily dependent on such local collaboration. Perhaps it is possible to develop the work further by adding Public and Patient involvement into the research.

Future Potential

If focus is placed on the two themes, “bullying adults” and “relations for youths” it may allow for a breakthrough, judging on the originality of the areas. However, the research needs to be conducted more as programs rather than spread over a list of projects. Also, we would like to see improved (or more visible) interaction with other research units at the university that deal with bullying and the situation of young people.

The vitality score is somewhat higher than the average (1.13). The potential for breakthrough lies mainly in the identification of original questions (see comment on the research area of bullying adults in schools).

In terms of sustainability, the two professors are both 60+ and so there should be serious reflections on the generational turnover.

Summary and Recommendations

This is a young research environment, even if an established field of research [Please note Editors' comment above]. It may seem unfair to evaluate it only based on two years publications. However, due to the small number of publications, the low citation score, that coherent research programs are not yet in place, it is difficult to give it a high score. In terms of productivity, based on the material registered in the bibliometric data, this is still a mediocre subunit that does not yet accomplish the level of national average. It is also facing a generational shift with the two professors about to retire within a few years' time and thus planning for recruitment is of utmost importance. There is also a serious need to ascertain that junior staff get an opportunity to qualify themselves and to do research. By tightening the research programs and focusing the limited resource on these programs there is a potential to make a difference in an important area for society. The researchers are recommended to also strive for publishing in higher impact journals.

Overall Grade: 1

Youth & Society

First Rapporteur: Alexander von Eye

Second Rapporteur: Katarina Eckerberg

Quality of Research

Youth & Society (YeS) is a relatively small subunit. It includes two professors with permanent positions, two researchers, five postdocs, three PhD students, one lecturer, and two project secretaries. The subunit is interwoven with the Psychology unit. The subunit's research activities can be located on the interface of psychology, developmental science, political science and sociology. The output targets both academic audiences and communities. Two teams (Center for Developmental Research and Center for Studies on Civic Engagement) conduct a large number of projects. Among the highlights are:

- a natural experiment to understand how adolescents change when they engage in sports
- adolescents' involvement in political activity (5 projects)
- exposure to threats and harassment
- preventing and reducing prejudice in adolescents

This is a rather young research group that is heavily dependent on external funding, which will end in 2018 (as of now).

It is unclear whether, and if so how, FamForsk (see above in Sociology) is connected with Youth & Society. If they are not connected, then why not, since the research should be mutually rewarding.

Scientific Output and Quality

The number of publications is small, which is in accordance with the relatively small size of YeS. Considering only postdoctoral members of the subunit (all of whom have research obligations) the average yearly output is 1.25 papers per person per year. This number drops to below 1 when additional "research staff" are also included as potential contributors. On the positive side, the number of publications has seen a monotonic increase over the evaluation period.

While the average publication numbers are small, the publication success is breath-taking. The lead professor of psychology of this subunit has a fantastic citation record. Numerous papers authored by him are cited in excess of 100 times, one paper is cited almost 300 times and another almost 600 times.

Research Environment and Infrastructure

The scientific competence and coherence of the researchers of the YeS unit seem excellent. The subunit also has two secretaries. (It is unknown to the panel whether these are funded by the university or by project money.) Research is conducted in a very large number of projects. It should be mentioned, however, that the separation of the YeS from the Psychology department is perceived as somewhat artificial.

Scientific and Social Interaction

The senior members of the YeS are very well connected, both nationally and internationally. This applies in particular to the lead psychology professor of the subunit.

Future Potential

There is a good deal of uncertainty regarding the potential for YeS to carry its success into the future. It is hard to replace a scholar of eminence such as the professor of psychology, which must be done within a short period of time. The vitality of this group is otherwise good, but

since the majority of staff (postdocs and PhD students) are employed on fixed-term contracts they are dependent on the senior professors to find funding beyond 2018.

Summary and Recommendations

Summary: A small, very research-active and successful subunit.

Recommendation: To invest a lot in replacing the professor when the time comes. To increase the number of research-active faculty staff.

See Annex G for comment on the didactic research in this subunit.

Overall Grade: 4

Faculty of Medicine
and Health

Biomedicine

First Rapporteur: Anders Ekblom

Second Rapporteur: Torben V. Schroeder

Quality of Research

The output has been rather constant over time although there is a slight decrease in quality. The bibliometric data is not that impressive and there is a lack of significant papers. Journal Normalised Citation score (NCSj) as well as a Field Normalised Citation score (NCSf) is below and significantly below international average, respectively.

It is obvious that there is a lack of significant papers within the field of biomedicine as defined in the self-evaluation. However, within the interaction with medicine there is a thriving scientific output and one wonders to what extent it is meaningful to have a division between the two areas.

Research Environment and Infrastructure

There are three different research centres. “The Cardiovascular Research Centre” (CVRC) is an integrated part of both biomedicine and medicine where the research and funding is of highest quality and is a good example of how translational research should be conducted. The same thing can be said for “Inflammatory Response and Infection Susceptibility Centre”, although not as successful as CVRC, this centre also has a very good output. Finally, “Nutrition-Gut-Brain Interaction Research Centre” is a very successful endeavour. All three centres provide very good networks in different sub-fields within the field of medical science.

The organisation with centres as a node for interactions between biomedicine and medicine is a good strategic way to provide means for translational research. It will be interesting to see how this new organisation will work out within the next few years.

Scientific and Social Interaction

There is a good international network which is obvious both in funding and publications. The national networks as well as networks within the university are outstanding. However, the research groups that do not belong to any of the three centres seem to be rather isolated within the university, with the exception of the urinary bladder cancer research group which is part of another centre.

Future Potential

The subunit has created an excellent potential for translational research at all three centres, and there is a good potential for an increasing quality and quantity of the research.

The sustainability is good especially for those research groups with an interaction with the field of medicine.

Summary and Recommendations

Biomedicine as an isolated subject lacks good infrastructure, but the creation of research centres with the goal of creating strategic alliances for translational research seems to have been successful.

Overall Grade: 3

Medicine

First Rapporteur: Torben V. Schroeder

Second Rapporteur: Anders Ekblom

The quality of research can only be based on the bibliometric data provided and only for the whole subunit and not for the different research groups or centres. Another challenge for the assessment is the fact that research within clinical medicine involves close collaboration between the university and the university hospital – and a clear separation is not always possible and in some instances persons appear twice in the provided data set. Please note that PhD students are only listed in the evaluation material if they are employed by the university and not listed if employed by e.g. Örebro University Hospital.

Quality of Research

There is a high output that is stable over time. The journal and field citations scores (NCSj and NCSf) are both significantly above international average (very good) and with a quality that remains at a level above average. There are good international collaborations visible in the bibliometric data and there is quite a few paper published in top notch journals and the average percentile model point per person is high. The number of research degrees awarded has been on average seven during 2008-2014, but a rather dramatic decrease is noted for the last years.

It is not possible to directly assess the originality and relevance based on the data set provided, but it is obvious that there is well working translational research which has had impact both nationally and internationally.

Research Environment and Infrastructure

The creation of research centres like “Cardiovascular Research Centre” and “Nutrition-Gut-Brain Interactions Centre” has created proof of principle while other centres such as “Older people’s health and living conditions”, “Research enabling an active life” and “Urologic cancer” have created excellent infrastructures. Another part within the infrastructure is the clinical epidemiology unit, which seems to have strong interactions with most research groups. However, an overall research strategy is missing.

Scientific and Social Interaction

There are good interactions between research groups, due to the organisation in different research centres. In addition, there are networking and collaboration taking place internationally as well as nationally. The main collaborator is, however, the county. The subunit also interacts with industry, which has led to new products and strong industrial commitments.

There seems to be close connections between university employees and hospital employees as well as between biomedicine and medicine.

Future Potential

There is a drive in some of the research groups/centres that is mirrored by external funds. Also, external funding seems to be increasing. There are, however, signs that this subunit is rather unbalanced. There are excellent research groups and research groups with a more modest influence on the research community.

A sustainable future strategy needs to be set up which will be further improved if the additional funds coming through the ALF⁹ is used strategically. Furthermore, the age profile in some of the research groups must be considered.

⁹ ALF: Avtal för Läkarutbildning och Forskning; *Agreement on Medical Education and Research.*

Summary and Recommendations

In the field of Medicine, Örebro University has some very strong research environments, with the highest international class in some areas, while others are not up to that level. It is noted that quite a few employees do not hold a PhD degrees, but also that some professors and senior lecturers have limited time for research. Funding seems to be increasing and the most important interactions with the subunit of Biomedicine and with the University Hospital seem well-established and growing.

A clear vision and strategy to reach that vision is missing. The subunit has several strong research areas but a number of the senior lecturers are not very research active. The number of research degrees awarded has been on a good level, but recently dropped, which raises concerns about the future. Along that line a number of the professors, senior lecturers are approaching the end of their active career and a rejuvenation and recruitment strategy is needed.

Overall Grade: 4

Disability Science (SIDR)

First Rapporteur: Ingalill Rahm Hallberg

Second Rapporteur: Torben V. Schroeder

Quality of Research

The Swedish institute for disability research (SIDR) is an organisation established in the year 2000 and with a solid position in this field of research on a national level. Unfortunately, the provided material makes it difficult to assess the quality of the different research groups/centres. Moreover, SIDR is a joint initiative between three universities which makes it difficult to assess the contribution from Örebro University vs. the others. The scientific output is moderate (38 publications) bearing in mind that the number of researchers active in the field is ten with a total time of about 6.3 full-time equivalent researchers. The quality judged from the citation frequency is below average and about a quarter of the papers published are not cited. Journal Normalised Citation score (NCSj) as well as a Field Normalised Citation score (NCSf) are within international average, although in the lower end of the spectrum. The number of top cited publications is below the average although the percentile model point per person is 2.0 in median. The number of publications has increased over time (2008 – 2012) from five to ten papers annually. The NCSf has varied substantially from insufficient to good and then back again to insufficient in 2012. DiVA data is below Swedish average. Three researchers stand out with publications among the top 25 % but no top cited papers. Thus, the overall quality of research could perhaps be improved by going for higher impact journals and focusing the research.

The SIDR covers four research groups which perhaps are too much judged on the limited amount of research time available. The clinical audiological research and the research in dual sensory loss (deaf/blindness) stand out as original and clinically relevant and the collaboration with the university hospital is very good. Also, the research related to persons with special needs is of great societal importance. It is however dominated by contract research. In addition, research related to disability, school and working life forms a research theme. On average 1-2 persons per year obtains a PhD degree from this subunit. The list of ongoing projects is huge and gives the impression of working in small projects rather than in a few coherent research programs. The fragmentation of research is also shown in the publication profile. More than 50 projects are listed, perhaps demonstrating commitment and vitality but could also be hindering in being competitive and making breakthrough in the field.

Research Environment and Infrastructure

The scientific competence consists of two professors and both of them are not far away from retirement. In addition, there are seven senior lecturers of which three had no research time in 2014 (if not using the 20 % time for professional development for research). Furthermore, there are lecturers and adjunct lecturers and six doctoral students. No postdoctoral researchers are listed and the academic progress of the senior lecturers is not provided. Altogether, there is a need for recruitment of professors as well as postdoctoral researchers to ensure the sustainability of the research unit. The SIDR has been successful in obtaining a Linné-grant but it is not clear if it has been extended beyond 2014 and thus external funding is needed. The collaboration between Örebro University and Jönköping may secure funding for SIDR but that is not clear from the material provided. The SIDR would benefit from a few more coherent research programs and a reduction of the long list of projects. The infrastructure in terms of facilities at the university hospital is seemingly well-established. Since the SIDR is a joint initiative by Linköping University, Örebro University and since 2012 the University of Jönköping their respective profiles and research agenda is expected to clarify the role of Örebro University.

Scientific and Social Interaction

The SIDR plays an important role nationally as well as internationally. This is demonstrated by hosting networks, doctoral programs and by working interdisciplinary but the international research collaboration is not clear. The SIDR also plays a significant role in international collaboration and offers a European doctoral program in disability science. They have a very good national scientific network including clinicians as well as academics covering a broad range of areas from biomolecular research to behavioural science. Societal interactions are mainly demonstrated in that their competence is asked for by several Swedish authorities and organisations. It is however not clear if there is public or patient/consumer involvement (PPI) in the research carried out.

Future Potential

The SIDR is an interesting organisation in terms of the area of research and judging from the list of projects the researchers are committed to the field although focusing is needed. The resources are sparse and it is not clear if long term finances is secured once the funding from the Linné grants has come to an end. The list of research projects perhaps point towards that much could be gained by focusing the research more. That may lead to going more into depth and being more successful in obtaining grants from national and international funding bodies. Also the researchers should perhaps review the journals they publish in and find out if these are the most prestigious in the field. That is their potential for breaking through in some of their four fields. Recruitments of professors and postdoctoral researchers are needed in order to secure sustainability.

Summary and Recommendations

Based on the output and quality in publications the overall grading of this subunit is 2 (sufficient).

The potential for becoming internationally leading in research is good since the area of research is original and gives opportunities for becoming competitive internationally. The sustainability of SIDR needs to be secured both in terms of recruiting professors and postdoctoral researchers and in terms of long term funding. The research within the four themes stand out as fragmented and the limited resources may hinder breakthrough in the field. This subunit has the potential to become significant for Örebro University.

Overall Grade: 2

Nursing Science

First Rapporteur: Ingalill Rahm Hallberg

Second Rapporteur: Alexander von Eye

Quality of Research

The current organisation and structure for Nursing Science was established in 2013 and thus the bibliometric analysis does not coincide with the research environments and the research groups. The number of members of the Nursing Science unit is large. However, there is only one professor and many permanent, fixed-term and adjunct lecturers. The scientific output in terms of overall number of publications is good taken into consideration that the total time for research including all staff is about 4.5 – 5 full-time equivalents. Although the number of published articles seems to be high, considering the relatively large number of faculty staff with research duties (15), this number is, per capita, less than impressive: 1.08 per year. Thus, it is a large but moderately productive subunit, with good citation impact and a share in top papers. The citation scores are slightly above average in terms of field normalised score and 5.6 % publications belonged to the top 5 %. The subunit has weak scores in DiVA, 40 % below Swedish average. The number of publications is slightly increasing. About 16 % of the publications were not cited during the evaluation period. On the individual level one of the researchers (the only professor) have publications belonging to the top 5 % while two other researchers have publications belonging to the top 25 %. The sole professor of the subunit has only one paper that is cited more than 100 times. However, by striving for publications in higher impact journals the scientific quality would improve. Of the 58 persons listed in the Primula report less than half of them are reported as having publications in the bibliometric analyses. The scientific output is regarded as moderate taken into account the limited time available for research although limited time for research may be an indication of not being successful in attracting external funding.

The research is organised in four general research environments and under each of them between 1 – 5 research groups are presented, some of them very broad. This goes for the research environment covering the child, the family and the caring system and the society (FAMN). It also goes for the environment “Older people’s health and living conditions, from cell to society”. The most coherent research environment is the one covering perioperative nursing. Perhaps the most original research groups are those covering TIME and LISAN. The research themes presented are all relevant from a clinical perspective although it is hard to see how the research can be carried out in so many areas with so little resources for research. This impression is strengthened further by the fact that each environment lists 9 – 21 projects and in addition there are 14 more projects reported not belonging to the research environments. The research environment focusing on continued professional development and education in nursing is broad and gives the impression that it is in an early stage. It would perhaps benefit from collaborating more closely with Education at Örebro University. It is not clear if the research in each group is working along the line from discovery to evaluating interventions. The environment of perioperative nursing is presenting studies on the effects of new interventions, while this is not clear in other environments.

Research Environment and Infrastructure

The scientific competence covers only one professor and one adjunct professor and many of those listed do not have PhD degrees and the academic level of the remaining academic staff beyond doctoral dissertation cannot be revealed. Only two doctoral students are listed¹⁰ and no postdoctoral researchers. The age structure however opens for recruitment strategies that can

¹⁰ *Editors’ comment:* Please note that only academic staff employed by the university was listed in the evaluation material. PhD students employed e.g. by Örebro University Hospital were therefore not listed.

strengthen the research. The total time for research is very low (not taken into account that the 20 % time for professional development may be used for research) and putting that in relation to the four research environments, the ten research groups, and the high number of listed projects gives the impression of fragmented use of resources and investing in projects rather than a few coherent research programs with the strength to obtain grants from national and international funding bodies. So far, grants from national funding bodies are from Forte. The information about external funding is not clear and thus hard to evaluate. The leadership structure is difficult to see through and the limited resources perhaps should lead to a tighter organisation.

Scientific and Social Interaction

The international scientific collaboration varies between the four research environments although overall it is rather limited and restricted to national collaboration, mainly with nearby universities. Collaboration is also established with other research environments within Örebro University, such as the Nutrition-Gut-Brain Interactions Research Centre. The societal interaction is mainly with consumer organisations like municipalities, the county and user organisations. The collaboration with the university hospital is the strongest part. The public-patient involvement (PPI) is not that developed yet although it is mentioned in particular in relation to the aging population.

Future Potential

As far as the potential of the Nursing Science is concerned there is some uncertainty. The overall impression is that nursing research is productive and has published some papers of interest for the wider scientific community. Thus, commitment and hard work stands out, in particular when considering the limited resources for research. The current organisation is very young and has to be tested. The research ambitions are far too broad with the limited resources and also the list of projects is not convincing in terms of going into depth and ending up with knowledge that can inform practice. Having said this, the vitality of the subunit is good and by focusing the research more the subunit will have breakthrough potential in some areas. Sustainability is dependent on being more successful in obtaining external grants. It is also dependent on the large program for undergraduate and graduate studies.

Summary and Recommendations

The overall assessment of nursing science research would be 3 based on the moderate productivity, some successful publications together with the fragmented research profiles and limited resources. The challenge is to concentrate the research, build more coherent research programs that have the ability to compete for the large grants available. Thus, it is recommended to strengthen the research arm of the subunit.

Overall Grade: 3

Occupational Therapy

First Rapporteur: Ingalill Rahm Hallberg

Second Rapporteur: Alexander von Eye

Quality of Research

The research belonging to the area of occupational therapy is small in terms of staff holding a PhD degree. The scientific output according to the bibliometric analysis is 28 publications over the years of which 29 % has not been cited. The productivity of the subunit is moderate but with weak impact and hardly any top cited papers. DiVA data is very weak. The total time for research as presented from Primula is about 2 full-time equivalents. Even considering the relatively small number of individuals charged with research in the Occupational Therapy unit, the number of publications is small (1.06 per faculty per year). Considering only postdoctoral members of the subunit, the average yearly output is 1.25 papers per person per year. The professor of the subunit has not a single paper that is cited more than 21 times. The adjunct professor has a slightly better citation record, but none of her papers was cited more than 50 times. The field normalised citation score is below average although some 1.4 % belongs to the top 5 %. The number of papers per year seems stable and low. The vitality is above average indicating a development under way. The publication profile is fragmented over several areas indicating that there is not yet a coherent research program. It is not possible to find out how many dissertations have taken place over the years since the entire health area is reported together. In the presentation there is one doctoral student reported. The research output in terms of publications is low and it would be advisable to go for higher impact journals.

The small resources for research are gathered under the heading REAL (Research enabling an active life), and it is said to mainly focus on disabled people. The collaboration is mainly with the area of sport. It is somewhat surprising that no collaboration with Disability Science is put forward. The research is divided into three research groups focusing the outcome of rehabilitation interventions, methodological development and systematic description of function, activity and participations of persons with disabilities. The list of projects is extensive taken into account the limited resources. The areas of research make sense clinically as well as from the perspective of occupational therapy, although it would probably benefit from being more focused and restricted to one or two programs. The teams are interested in experimental work, the construction of diagnostic measures, and the description of persons with disability.

The faculty in the subunit seem to be competent, to possess the needed resources, and to be well organised in their research. The role that the lecturers play in the research process is unknown.

Research Environment and Infrastructure

The scientific competence is limited to one professor, one adjunct professor, 11 (senior) lecturers with permanent positions, and one fixed-term researcher. Of these, only three (plus one IT assistant) are charged, in part, with research. One of the professors is at the county and the financial resources as reflected in research time are small, although those listed in primula may use their 20 % work time for professional development for research. The age structure indicates a need for a recruitment strategy. The infrastructure in terms of seminars seems well thought out. The self-evaluation points at a too heterogeneous research profile which is strongly supported in this evaluation. In terms of organisation there seems to be strong collaborations with Sport Science but how that is organised is not clear.

Scientific and Social Interaction

International scientific collaboration is sparse but said to be under development. The national collaboration is mainly local and involving the university hospital and the city council which seems adequate. Societal interactions are presented and not extensive. The area of disability is well suited for public and patient involvement strategies in research and should be developed. The subunit was founded with the goal of creating a more homogeneous group of researchers. However, the subunit should continue work in that direction and in addition restrict the number of projects.

Future Potential

As far as the potential of the Occupational Therapy is concerned, there is a certain degree of uncertainty. The vitality of these researchers considering the number of projects and the limited resources indicates committed researchers. It is hard to make out the role played by the many lecturers. The research areas are important from a health care perspective and also for the occupational program. Perhaps some new opportunities would open up if collaboration with Disability Science is established. The potential for future success is dependent on adapting the research profile to the resources and going into depth rather than trying to cover too much. It is recommended to strengthen the research arm of the subunit.

Summary and Recommendations

The overall grading of this research area would be a 2 based on the limited output, limited success in gaining resources for research and the very broad coverage of research questions not taking advantage of synergy. The recommendation would be to expand the collaboration with Disability Science and also to focus the research in one or two themes. Also, it is recommended to try to publish in higher impact journals. A strategy for replacing those about to retire is needed and it should be adapted to the current research areas.

Overall Grade: 2

Public Health Science

First Rapporteur: Anders Ekbohm

Second Rapporteur: Ingalill Rahm Hallberg

Quality of Research

The research environment “Public health, economics and research for practice, policy and politics” (PHEAR-3P) was established in 2012 and thus it may be problematic to give a statement about research output and quality. There is a low production of publications with no particular high quality. The impact is low and there are no top cited papers. The DiVA data is also weak. However, there is an increase in publication volume.

In the self-evaluation the subject makes the case that the bibliometric information is a poor indicator for scientific quality and the chosen time period is too short to assess the impact of a subject such as public health. Even after taking this into account it is obvious that the impact, originality and relevance of the production has at the best been marginal. The research is spread over many areas and more than 30 projects are listed, pointing at no coherent research programs.

Research Environment and Infrastructure

The scientific competence is limited in the sense that only 12 persons are listed in Primula and in that list three project secretaries are included, and one doctoral student. Judging from the list, only six persons in the staff holds a PhD degree. The total research time including the three project secretaries is 6.1 full-time equivalents. Thus, the resources are limited whereas the profile and goals are very broad and extensive. The aim is to translate knowledge into action. The subject can show reports published biennially in the biennial national conference “Reflection on Prevention”.

Although the subject is small, there are five different research groups with different foci. There are very few fulltime researchers and there is only one permanent position, which is due for retirement shortly.

Scientific and Social Interaction

There are international collaborations and a good national network.

Bridges have been built to different municipalities within the county. But where is the interaction with the county?

Future Potential

There is no coherent organisation and there is also a lack of critical mass. The potential is low.

The sustainability is questionable if no recruitments are put in place.

Summary and Recommendations

The field of public health is important, well described by the subject, but the activity is low and there should be a strategic discussion regarding where this subject fits into the overall strategic goals of Örebro University.

Overall Grade: 1

Sport Science

First Rapporteur: Kenneth Nordgren

Second Rapporteur: Ingalill Rahm Hallberg

Quality of Research

The scientific output is good and of high quality judging from the citation scores and the share of papers not cited (7 %). About 2.5 % of the publications belong to the top 5 %. The publication track record seems to be going down. On the individual level one researcher belongs to the top 10 % and another four to the top 25 %. According to DiVA, there are 42 publications on level 2 and 96 on level 1. Publications point over average. The professors perform significantly over average. There are contributions from all senior lecturers. Thus the overall impression is that the research is of good quality. The number of PhD students passing yearly range from 1 to 2.

The subunit has two research teams: sport physiology and educational aspects, both of them of significance and relevance. The interdisciplinary approach seems to promote originality in the proposed research questions. However, the list of research projects covers 20 projects and the research environment "Research in Sport and Physical Activity" (RISPA) is presented in five research groups covering exercise physiology, social science in sport, SMED – sport science, SMED – education and critical studies in men and masculinities. It is not clear how this group of researchers contribute to these three latter research groups.

Research Environment and Infrastructure

The scientific competence consists of three professors, one assistant professor and eight senior lecturers and in addition nine doctoral students. Of those listed from primula ten report having a PhD degree. The research time available for 2014 including the doctoral students is 8.5 full-time equivalents and the report indicate some external funding, local as well as national. The collaboration with research groups outside RISPA is developed but not clearly reported in terms of what it contributes with to this subunit.

Scientific and Social Interaction

According to the self-evaluation there are interactions between the two research teams in the education program. From the Web of Science data it is not obvious interactions on a research level.

International collaboration is moderate. Bibliometric data indicate international co-authoring and collaborations, especially with Norway and Denmark.

The bibliometric data indicate relevant national collaborations. The interaction with the university hospital remains unclear and no physiotherapists are reported as active in research from the county.

Activities are communicated in popular science, conferences, social media and course literature. There is also a national graduate school (lic.) for teachers in physical education.

Future Potential

Vitality score is 1.08. There are few highly productive researchers but also important contributions from senior lecturers. The RISPA is a research environment with good output and in particular the area of exercise seems well-timed and with breakthrough potential. It is an area of great international interest right now.

The subunit as a whole seems stable. One professor close to retirement. Few senior lecturers have had research activity. The subunit has several external grants from different funding bodies.

Summary and Recommendations

The subunit as a whole has a strong potential. There is staff with high production but few senior lecturers with research activity. The didactical or educational perspective has become a strong theme. It is important to consolidate the achievements. The Lic. Research school will probably not be renewed by the government. Both Social Science in Sport and SMED are, according to the descriptions, focusing on a general educational and social perspective on physical learning. A subject didactical approach could strengthen the relationship between discipline and educating.

Recommendations

- There seems to be a well working strategy. The overall recommendation is to continue on that path.
- Increase the research activity among the senior lecturers.
- Investigate whether the grounds for collaboration between the disciplinary perspective and the educational perspective are adequate or need to be strengthened.

See Annex G for comment on the didactic research in this subunit.

Overall Grade: 3

Region Örebro län

Region Örebro län: Biomedicine

First Rapporteur: Anders Ekbohm

Second Rapporteur: Torben V. Schroeder

Quality of Research

A comparison of bibliometric data between biomedicine at Örebro University and the constellation where Region Örebro län (county) is included shows an enormous increase in quality and quantity with an increasing trend over time. In addition, some very good papers have been published recently. Thus, the interaction with the county gives significantly higher originality and relevance.

Research Environment and Infrastructure

The county provides access to translational research as well as additional funding and there are reasons to believe that this has had an influence on the research quality.

Scientific and Social Interaction

The area has very good international collaborations and there is also an outstanding national network. In addition, the interaction with the county is a major asset.

Future Potential

The very high quality of research and the increasing trend in quality, together with the organisation in different centres, propose that there is high potential for the future. Furthermore, the sustainability is judged to be good.

Summary and Recommendations

Biomedicine in collaboration with Region Örebro län has very high to excellent scientific output and a future increase of interactions between the two organisations is recommended.

Overall Grade: 4

Region Örebro län: Medicine

First Rapporteur: Anders Ekblom

Second Rapporteur: Torben V. Schroeder

Quality of Research

There is a high scientific output that has increased significantly over time by more than 50 % (2008 – 2012). The journal and field citations scores are within the international average (good) and has remained so during the time period. There are good international collaborations evident in the bibliometric data, but to some extent less prominent compared to medicine within the university. This can partly be explained by the fact that surgery is now shown as one separate entity.

Looking at the different research units and clinics at Örebro University Hospital, the scientific production is very uneven. For example, Cardiology has been very productive while for instance endocrinology and haematology have very modest scientific production.

It is not possible to directly assess the originality and relevance based on the data set provided, but the subunit is characterised by translational research within the different centres. Self-evaluation is lacking but it is obvious that the output has significant impact and relevance.

Research Environment and Infrastructure

The different centres are important parts of the infrastructure and there seems to be good interactions between the Core facilities within the university.

The organisation with a close interaction with the county seems to be working fine.

Scientific and Social Interaction

There seems to be well-established international collaborations according to the bibliometric data. There is also an outstanding national network.

Future Potential

Opposed to Medicine as such there is not a rising trend. Moreover, there are some research groups of very questionable quality in this area.

There is a need for additional recruitments within the health care system in order to facilitate the sustainability and potential of the structure.

Summary and Recommendations

There is a good structure but, there is also an unmet need for better interaction within the clinics as well as with the University in some instances.

Overall Grade: 3

Region Örebro län: Surgery

First Rapporteur: Torben V. Schroeder

Second Rapporteur: Anders Ekbohm

Quality of Research

There is a high output that has remained stable over time both within qualitative measures and quantitative. The field citation score is significantly above international average and the subunit has a slightly more than expected share of top cited publications. The subunit has good national and international collaborations.

Parts of what is published within this subject is of extremely high international quality. That goes especially for the cancer part, which is a result of the interaction between the health care system and the university.

Research Environment and Infrastructure

Looking at the different research units and clinics at Örebro University Hospital the scientific production is very uneven. For example, urology and anaesthesiology have been very productive while for instance the orthopaedics clinic has a very modest scientific production.

The more productive departments have created a win-win situation and there is also infrastructure with regards to other areas that provide needed resources. The age profile is a little worrisome; there is a need for future recruitments.

There seems to be an outstanding interaction between the university and the health care system.

Scientific and Social Interaction

There is a good international network illustrated in the bibliometric data. The national network is outstanding.

Future Potential

There is vitality and breakthrough potential in Surgery in Örebro, which has already been shown in the cancer field. However, the somewhat troubling age profile should be kept in mind in judging the sustainability.

Summary and Recommendations

The area of surgery at Region Örebro län show strong research output with a good potential and a good funding situation. The age profile among the researchers calls for a rejuvenation and recruitment strategy.

Overall Grade: 4

Region Örebro län: Disability Science (SIDR)

First Rapporteur: Ingalill Rahm Hallberg

Second Rapporteur: Alexander von Eye

Quality of Research

The evaluation material is restricted to bibliometric indicators and for the evaluation period the seven researchers reported has published 23 papers with a very good citation frequency, indicating good quality. About 5 % of the publications belong to the top 5 %, while about 20 % of the publications are not cited during the evaluation period. Thus it is a small and moderately productive subunit with very good citation impact. When it comes to the subjects demonstrated in the publication profile, the subjects do not resemble that of what is going on in the SIDR at Örebro University and the range of subjects is almost as broad as the number of publications. The scientific quality is good but fragmented over very different research areas.

Research Environment and Infrastructure

Not applicable

Scientific and Social Interaction

Not applicable

Future Potential

The researchers presented under the heading of SIDR possess great potential if connected with relevant groups at Örebro University.

Summary and Recommendations

The overall assessment would be 3 based on the lack of a coherent program of research but recognising that some of the research is very good. The challenge for the university and for the county is to find fruitful collaborations and connections so that they can contribute to the each other's success.

Overall Grade: 3

Region Örebro län: Nursing Science

First Rapporteur: Ingalill Rahm Hallberg

Second Rapporteur: Alexander von Eye

Quality of Research

The evaluation of research at Region Örebro län is restricted to the bibliometric analysis. In the analysis, it is shown that an additional 19 researchers are involved in nursing research at the university hospital. Their research holds good quality on an individual level. One researcher belongs to the top 10 % and four more belong to the top 25 %, and six more belong to the top 50 %. Thus, their scientific output is of good quality. Over the years, 65 papers have been published and about 85 % of them have been cited by others. The citation scores are close to average and a share of 2.65 % belong to top 5 %. The number of papers is increasing slightly is perhaps also reflected in the vitality score. The originality cannot be evaluated from the provided material. However, the publication profile is spread out over many different research areas.

Research Environment and Infrastructure

Not applicable

Scientific and Social Interaction

There are international scientific networks as shown in the bibliometric analysis and in the list of most frequent collaborators. This goes as well for national collaborations.

Future Potential

The clinically situated nursing science researchers stand out as a vital group. Their collaboration with the university cannot be evaluated and judging from the publication profile, their research areas are not clearly linked to what is going on in the university. Their track record in terms of publications is good indicating good research quality. The university and the county are strongly advised to strengthen their collaboration. Also it is strongly advised to identify areas of great potential, and work together in these areas in order to succeed in some potentially very good areas.

Summary and Recommendations

The clinical nursing research output is of good quality, giving an overall grade of 3. Other important aspects like resources, infrastructure and research environment cannot be evaluated based on the provided material. It is recommended to go for higher impact journals and it is also recommended that Örebro University and Region Örebro län identify areas of common interest and build strong collaborations in order to become more competitive. The research profile should preferably be more focused in order to use the scientific competence more efficiently.

Overall Grade: 3

Chapter II: Bibliometric report

ORU2015
Bibliometric peer review of ORU research
2008 – 2014

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Örebro University

and

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Sahlgrenska Academy
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Indicators used in the report

Table 2. Sample of indicators used in the report

1	P	Number of Papers	Number of papers (articles, letters and reviews) during 2008-2012.
2	Frac P	Number of Fractionalised Papers	Sum of author fractionalised papers (articles, letters and reviews) published during 2008-2012.
3	FAP	Field Adjusted Production	Sum of weighted papers based on Nordic reference values 2008 – 2012.
4	NCSj	Journal Normalised Citation Score	CPP normalised in relation to the unit journal set (average=1.00).
5	NJCS	Normalised Journal Citation Score	The impact of the journal set normalised in relation to its sub-fields (average=1.00).
6	NCSf	Field Normalised Citation Score	CPP normalised in relation to the sub-field set (average=1.00).
7	TOPx%	TOP x %	Percentage of papers above the xth citation percentile.
8	VITALITY	Reference Recency	Mean reference age normalised in relation to the sub-field set (average=1.00, higher=younger and more recent references).
9	PNC	Uncitedness	Per cent uncited papers (self-citations are considered as non-cites) out of the total number of papers.
10	AUm	Author Mean	Mean number of authors per paper.
11	IntCOLLm	International Collaboration	Mean number of countries per paper.
12	PM points	Percentile Model Points	Points based on citations and production.
13	PM level	Percentile Model Benchmark	Benchmark towards 48.000 Swedish researchers in percentile groups.

A further description of citation indicators and the bibliometric approach is given in the section Theories and methods in evaluative bibliometrics.

Results Section – Overview

Results for UoA and sub-units on one page

UOA & SUB-UNIT		WEB OF SCIENCE 2008-12										DIVA 2008 - 2014																
UOA	SUB-UNIT	Full P	Frac P	NCSJ	NCSJ	NCSF 2y	VITA LITy	TOP 1	TOP 5	TOP 10	TOP 25	TOP 50	COL Um	FAP	Pers	PROD	PM Points	PM/ Pers	TOP Level	Level		PP REF	PP REF					
																				1	2			% 1	% 2			
A.	SCH BUSINESS	102	63	0.73	0.99	0.72	0.97	1.0%	1.3%	3.0%	14.0%	43.5%	1.9	1.1	67.1	53	1.3	251.2	4.7	TOP25%	324	69	64.0%	36.0%	5.0	7.1	0.7	
	1. BUSINESS ADM	34	20	0.57	1.05	0.63	0.57	0.0%	0.4%	2.5%	9.6%	48.7%	2.1	1.2	22.6	22	1.0	50.3	2.3	TOP50%	113	28	64.6%	35.4%	4.9	7.1	0.7	
	2. ECONOMICS	51	34	0.88	0.98	0.82	0.84	0.95	1.9%	2.2%	4.1%	18.0%	42.4%	1.6	1.1	35.0	18	1.9	183.2	10.2	TOP10%	95	18	65.1%	34.9%	4.3	7.1	0.6
	3. INFORMATICS	17	9	0.53	0.87	0.55	0.61	1.05	0.0%	0.0%	8.7%	36.0%	2.5	1.2	9.6	13	0.7	17.8	1.4	TOP50%	116	23	62.2%	37.8%	6.0	7.1	0.8	
	A. MATH & NATURAL & DIDACT	206	61	1.11	1.17	1.40	1.49	1.10	1.4%	12.5%	19.1%	37.8%	58.8%	4.5	1.5	42.7	39	1.1	311.7	8.0	TOP25%	343	164	42.4%	57.6%	4.9	6.2	0.8
	4. BIOLOGY	57	13	1.13	1.06	1.05	1.08	1.03	0.0%	0.0%	11.1%	27.4%	61.1%	5.1	1.6	9.3	10	0.9	40.7	4.1	TOP25%	95	36	52.2%	47.8%	3.9	6.2	0.6
	5. CHEMISTRY	120	31	1.35	1.28	1.86	1.95	1.14	2.4%	19.0%	29.7%	66.8%	5.2	1.6	20.6	15	1.4	217.0	14.5	TOP10%	222	101	41.2%	58.8%	6.9	6.2	1.1	
	6. MATH-PHYS	41	17	0.65	1.08	0.82	0.97	1.09	0.6%	4.5%	6.1%	23.4%	42.2%	2.5	1.3	12.8	14	0.9	54.1	3.9	TOP25%	26	27	37.5%	62.5%	3.5	6.2	0.6
	A. ENGINEERING	48	21	0.99	0.89	0.80	0.75	1.07	0.0%	0.0%	5.6%	50.8%	3.1	1.4	19.2	27	0.7	51.9	1.9	TOP50%	278	12	87.7%	12.3%	3.5	6.2	0.6	
	7. COMPUTER SCI	41	19	1.10	0.93	0.91	0.85	1.09	0.0%	0.0%	6.3%	28.4%	57.6%	3.1	1.4	16.9	21	0.8	49.1	2.3	TOP50%	269	12	87.2%	12.8%	4.4	6.2	0.7
	8. MECH/ENGIN	7	3	0.20	0.54	0.05	0.03	0.90	0.0%	0.0%	0.0%	0.0%	2.7	1.2	2.2	6	0.4	2.8	0.5	<top50%	9	0	100%	0.0%	0.6	6.2	0.1	
	B. HUMANITIES	58	28	1.10	0.92	1.29	1.47	1.11	0.2%	2.4%	10.8%	53.8%	2.2	1.4	31.0	55	0.6	104.7	1.9	TOP50%	202	132	42.2%	57.8%	6.2	7.1	0.9	
	1. CULINARY	29	5	0.84	1.10	0.87	1.06	0.0%	0.0%	5.8%	24.2%	56.0%	5.3	2.7	4.2	9	0.5	12.1	1.3	TOP50%	53	59	16.1%	83.9%	9.7	7.1	1.4	
	2. HISTORY														6	0.0	0.0	0.0		<top50%	18	1	98.9%	1.1%	3.8	7.1	0.5	
	3. LANG STUD														0.0	14	0.0	0.0		<top50%	18	1	60.0%	40.0%	1.4	7.1	0.2	
	4. MEDIA & COMM	25	20	1.17	0.86	1.08	1.21	1.09	0.1%	1.0%	11.6%	17.9%	55.2%	1.4	1.1	23.5	14	1.7	77.6	5.5	TOP25%	65	55	34.7%	65.3%	9.7	7.1	1.4
	5. MUSICOLOGY	4	4	1.10	0.96	3.17	3.80	1.25	1.2%	14.3%	14.3%	28.6%	42.9%	1.7	1.0	3.3	9	0.4	15.1	1.7	TOP50%	28	15	49.9%	50.1%	6.0	7.1	0.8
	6. RHETORIC														0.0	3	0.0	0.0		TOP50%	20	1	97.7%	2.3%	7.3	7.1	1.0	
	B. SOCIAL SCI & EDUCATION	64	42	1.02	0.84	0.94	0.83	1.00	0.0%	4.8%	10.0%	42.9%	1.7	1.3	45.4	63	0.7	182.0	2.4	TOP50%	281	115	58.8%	43.2%	5.0	7.1	0.7	
	7. CULT DIVERSITY	2	2	0.00	0.16	0.00	0.00	0.0%	0.0%	0.0%	0.0%	0.0%	1.0	1.0	2.5	2	1.3	3.2	1.6	TOP50%	23	5	71.0%	29.0%	9.9	7.1	1.4	
	8. EDUCATION	9	5	0.51	0.72	0.54	0.72	0.91	0.0%	0.0%	7.4%	10.4%	30.8%	1.7	1.1	6.1	19	0.3	11.9	0.6	<top50%	63	12	68.6%	31.4%	3.1	7.1	0.4
	9. GENDER	16	10	1.03	0.66	0.79	0.58	1.01	0.0%	0.0%	2.6%	28.7%	43.2%	1.8	1.8	11.2	11	1.0	29.1	2.6	TOP50%	44	58	29.2%	70.8%	7.9	7.1	1.1
	10. HUM GEOGRAPHY	3	1	2.34	0.67	1.81	1.91	0.95	0.0%	16.7%	16.7%	40.8%	66.7%	3.0	1.1	5	0.2	10.1	2.0	TOP50%	8	2	65.1%	34.9%	0.9	7.1	0.1	
	11. POLITICAL SCI	10	8	0.57	1.07	0.93	0.66	1.06	0.0%	6.4%	12.8%	25.5%	42.2%	1.7	1.2	8.8	10	0.9	27.8	2.8	TOP50%	58	17	53.7%	46.3%	6.1	7.1	0.8
	12. SOCIOLOGY	24	16	1.43	0.97	1.24	1.14	1.10	0.0%	8.4%	14.9%	50.8%	1.5	1.1	15.8	16	1.0	69.9	4.4	TOP25%	85	21	75.8%	24.2%	5.2	7.1	0.7	
	B. JPS - LAW, PSYC & SOC W	139	55	1.07	1.14	1.33	1.28	1.03	2.6%	7.9%	12.7%	29.5%	56.7%	3.3	1.4	41.8	65	0.6	294.1	4.5	TOP25%	500	138	67.7%	32.3%	6.6	7.1	0.9
	13. CHAMP	85	32	1.09	1.13	1.32	1.26	1.02	3.4%	6.7%	12.2%	30.4%	58.4%	3.4	1.5	23.2	16	1.5	185.3	11.6	TOP10%	172	54	61.4%	38.6%	6.4	7.1	0.9
	14. CRIMINOLOGY	12	4	0.88	1.33	1.16	1.11	1.01	0.0%	2.2%	9.8%	39.1%	57.2%	3.9	1.4	3.1	5	0.6	10.6	2.1	TOP50%	52	25	36.6%	63.4%	9.3	7.1	1.3
	15. LEGAL SCI														0.0	22	0.0	0.0				138	28	78.9%	21.1%	8.8	7.1	1.2
	16. SOCIAL WORK	8	3	0.40	0.93	0.44	0.46	1.13	0.0%	0.0%	3.7%	21.4%	3.3	1.0	3.6	12	0.3	6.6	0.6	<top50%	47	11	64.8%	35.2%	2.6	7.1	0.4	
	17. YOUTH & SOC	44	16	1.21	1.16	1.58	1.52	1.03	2.2%	13.3%	16.3%	30.9%	60.5%	3.0	1.2	11.8	10	1.2	91.6	9.2	TOP25%	91	22	67.7%	32.3%	5.3	7.1	0.7

UOA & SUB-UNIT		WEB OF SCIENCE 2008-12										DIVA 2008 - 2014																
UOA	SUB-UNIT	Full P	Frac P	NCSJ	NCS	NCSF	2y	VITA LITY	TOP 1	TOP 5	TOP 10	TOP 25	TOP 50	COL m	FAP	Pers	PROD	PM Points	PM/ Pers	TOP Level	Level 1	Level 2	% 1	% 2	PP REF	PP REF		
C. MEDICAL SCI		577	131	1.10	1.02	1.16	1.04	2.1%	7.6%	12.0%	27.1%	53.1%	5.1	1.5	90.5	83	1.1	610.6	7.4	TOP25%	747	195	66.3%	33.7%	3.4	6.2	0.6	
	1. BIOMEDICINE	121	31	0.66	0.82	0.53	0.48	1.00	0.0%	0.6%	2.1%	8.1%	4.5	1.2	21.4	26	0.8	42.6	1.6	TOP50%	171	19	81.2%	18.8%	1.9	6.2	0.3	
	1.1 RÖL-BIOMEDICINE	153	35	1.30	1.00	1.40	1.56	1.14	10.7%	15.6%	33.3%	58.4%	5.1	1.6	30.1	19	1.6	148.1	7.8	TOP25%								
	2. MEDICINE	476	100	1.23	1.08	1.36	1.35	1.06	2.7%	9.8%	15.0%	33.0%	59.0%	5.3	1.6	69.1	57	1.2	588.0	10.0	TOP10%	576	176	63.2%	36.8%	4.1	6.2	0.7
	2.2 RÖL-MEDICINE	396	109	1.02	1.03	1.10	1.09	1.06	1.7%	5.6%	10.5%	25.0%	49.2%	4.2	1.3	95.3	69	1.4	409.1	5.9	TOP25%							
	2.3 RÖL-SURGERY	225	59	1.08	1.11	1.23	1.23	1.09	1.4%	6.8%	14.1%	30.0%	56.4%	4.9	1.4	51.3	37	1.4	232.3	6.3	TOP25%							
C. HEALTH SCI		211	78	1.02	0.83	0.85	0.81	1.02	0.0%	2.8%	5.2%	22.5%	48.5%	3.1	1.3	56.8	62	0.9	155.5	2.5	TOP50%	595	90	68.7%	31.3%	4.4	6.2	0.7
	3. SDR-DISABILITY	38	13	0.85	0.89	0.72	0.75	1.00	0.0%	0.0%	2.9%	22.6%	43.6%	3.1	1.2	10.7	9	1.2	23.9	2.7	TOP50%	104	9	82.9%	17.1%	3.9	6.2	0.6
	3.1 RÖL-SDR	23	8	0.95	1.02	1.96	1.63	1.04	1.6%	4.6%	4.6%	18.2%	44.5%	3.0	1.5	7.3	7	1.0	22.9	3.3	TOP50%							
	4. NURSING SCI	86	29	1.11	0.82	1.01	1.13	1.04	0.0%	5.7%	8.3%	23.2%	51.0%	3.2	1.2	20.4	26	0.8	68.1	2.6	TOP50%	233	36	69.5%	30.5%	3.8	6.2	0.6
	4.1 RÖL-NURSING SCI	65	18	0.98	0.87	0.87	0.85	1.01	0.0%	2.7%	4.5%	20.9%	57.8%	3.7	1.5	18.7	19	1.0	46.2	2.4	TOP50%							
	5. OCCUP THERAPY	21	7	0.68	0.66	0.49	0.46	1.00	0.0%	1.8%	3.6%	5.4%	28.0%	3.0	1.1	4.7	6	0.8	9.2	1.5	TOP50%	58	1	95.7%	4.3%	2.9	6.2	0.5
	5.1 RÖL-OCCUP THERAP	7	2	0.78	0.73	0.66	0.53	1.07	0.0%	0.0%	5.7%	11.4%	43.8%	3.2	1.3	1.9	1	1.9	3.2	3.2	TOP50%							
	6. PUBLIC HEALTH	28	12	1.11	0.68	0.50	0.51	1.06	0.0%	0.0%	0.9%	9.8%	32.9%	3.1	1.4	9.2	9	1.0	16.3	1.8	TOP50%	104	2	94.4%	5.6%	4.0	6.2	0.6
	7. SPORT SCI	44	17	1.08	0.96	1.07	1.09	1.00	0.0%	2.4%	5.5%	36.9%	66.7%	3.1	1.4	11.9	12	1.0	38.0	3.2	TOP50%	96	42	45.4%	54.6%	7.0	6.2	1.1

Web of Science 2008-2012 (with citations counted until 2014)

P Number of papers (articles, letters and reviews) during 2008-2012 in Web of Science databases SCIE, SSCI and A&HCI.
Frac P Sum of author fractionalized papers (articles, letters and reviews) published during 2008-2012.
FAP Sum of weighted papers based on Nordic reference values 2008-2012. A group of ten is expected to have a FAP-value of about 10.
PROD Productivity = FAP divided by the number researchers in the unit.
NCSJ This indicator normalizes citation per paper (CPP) in relation to the journal set.
NCS The impact of the journal set normalized in relation to its sub-fields (average=1.00).
NCSF CPP normalized in relation to the sub-field set (average=1.00). All measures are based on article-level metrics.
Vitality Mean reference age normalized in relation to the sub-field set (average=1.00, higher values=younger and more recent references).
TOP X% Percentage of papers above the xth citation percentile.
PNC Per cent uncited papers (self-citations are considered as non-cites) out of the total number of papers.
Alum Mean number of authors per paper.
IntCOLLm Mean number of countries per paper.

Percentile Model (PM) based on publications and citations to papers 2008-2012

PM Points Points based on citations and papers. Points are given based on FAP and probabilities for the respective percentile groups.
TOP-Level Benchmark relating ORU-researchers to 48,000 Swedish researchers in percentile groups.

DIVA 2008-2014

Level 1 Publications in channels given level 1 in the Norwegian system (enlarged)
Level 2 Publications in channels given level 2 in the Norwegian system (enlarged), i.e. the 20 % of highest quality.
Percent (frac) Percentages of each level based on fractionalisation and publication points.
PP Publications Points, sum of publication points using the Norwegian model.
REF Reference value based on five Swedish universities (Umeå, UU, UIU, ÖRU) for all identified researchers (junior, senior and professor) and based on faculty areas.

Faculty of Business, Science
and Engineering

Faculty of Business, Science and Engineering
 Unit of Evaluation: School of Business

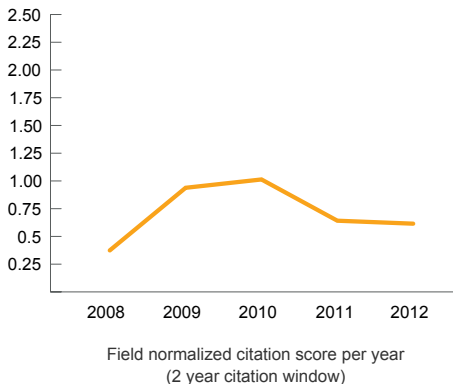
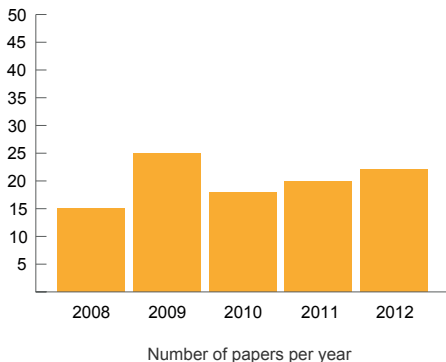
School of Business

GEN STAT		WEB OF SCIENCE																DIVA 2008 - 2014										
		#P20 08-14	#P200 8-12	#FRAC (08-12)	NCS FAP	NJC j	NCS S	VITA f	LITY	TOP 1	TOP 5	TOP 10	TOP 25	TOP 50	PNC	IntC AU m	OLL m	POINTS	TOP LEVEL	DIVA Level1	DIVA Level2	DIVA %Level1	DIVA %Level2	DIVA PP	DIVA REF	DIVA F		
jgn	M	Prof	BUS	5	4	1,7	1,9	0,56	1,29	0,72	0,94	0%	0%	0%	0%	77%	0%	2,4	1,2	4,1	TOP25%	7	3	43%	57%	7,0	7,1	1,0
hshd	M	Prof	BUS	4	2	0,8	1,0	0,78	1,40	1,02	0,94	0%	0%	0%	8%	100%	0%	2,4	1,0	2,4	TOP50%	2	3	24%	76%	5,3	7,1	0,7
cog	F	Prof	BUS	13	8	5,3	6,1	0,17	0,83	0,18	0,94	0%	0%	0%	6%	7%	69%	1,5	1,1	9,1	TOP25%	29	3	87%	13%	23,4	7,1	3,3
csnh	M	Prof	BUS	1	1	0,3	0,4	0,81	1,35	1,10	0,96	0%	0%	0%	0%	100%	0%	3,0	2,0	1,0	<TOP50%	12	0	100%	0%	4,3	7,1	0,6
gan	F	Seni	BUS	2	1	0,3	0,4	0,73	0,95	0,69	0,99	0%	0%	0%	0%	100%	0%	3,0	1,0	1,0	<TOP50%	3	0	100%	0%	1,2	7,1	0,2
hed	M	Seni	BUS	4	3	1,2	1,3	0,53	1,20	0,61	0,99	0%	0%	0%	0%	68%	0%	2,6	1,3	2,6	TOP50%	6	2	52%	48%	5,2	7,1	0,7
prfg	M	Seni	BUS	1	1	1,0	1,3	0,00	1,28	0,00	0,89	0%	0%	0%	0%	0%	100%	1,0	1,0	1,6	TOP50%	6	0	100%	0%	5,7	7,1	0,8
mufn	M	Seni	BUS	3	3	1,0	1,3	0,58	0,93	0,71	1,22	0%	0%	0%	10%	67%	33%	3,0	1,0	2,7	TOP50%	16	3	83%	17%	20,2	7,1	2,8
jge	M	Seni	BUS	2	2	0,8	0,9	0,57	1,59	0,89	0,88	0%	0%	0%	0%	100%	0%	2,4	1,4	2,2	TOP50%	2	1	31%	69%	2,2	7,1	0,3
csng	M	Seni	BUS			0,0																						
mshn	M	Seni	BUS	4	4	1,6	1,8	1,28	0,46	0,54	0,95	0%	0%	0%	0%	44%	0%	2,5	1,8	3,0	TOP50%	7	2	67%	33%	3,8	7,1	0,5
nask	F	Seni	BUS			0,0																						
shn	M	Seni	BUS	7	6	2,3	2,7	0,87	1,06	0,99	1,09	0%	0%	0%	40%	85%	15%	2,7	1,1	8,5	TOP25%	9	3	49%	51%	8,8	7,1	1,2
lhd	F	Seni	BUS			0,0																						
oejn	M	Seni	BUS			0,0																						
tajjn	M	Seni	BUS	4	2	1,0	1,1	0,80	0,87	0,74	1,05	0%	0%	0%	0%	59%	0%	2,0	1,5	2,2	TOP50%	4	5	19%	81%	11,1	7,1	1,6
jaen	M	Seni	BUS	2	1	0,5	0,6	0,93	4,22	3,94	0,91	0%	14%	100%	100%	100%	0%	2,0	1,0	7,2	TOP25%	3	0	100%	0%	1,5	7,1	0,2
plf	F	Seni	BUS			0,0																						
ftt	M	Seni	BUS	4	3	2,0	1,8	0,65	0,62	0,46	0,87	0%	0%	0%	0%	25%	0%	1,5	1,0	3,0	TOP50%	6	3	40%	60%	8,8	7,1	1,2
psa	F	Seni	BUS			0,0																						
grm	F	Seni	BUS			0,0																						
own	M	Seni	BUS			0,0																						
mbk	M	Rese	ECO	9	7	5,3	6,0	0,46	0,76	0,28	0,95	0%	0%	0%	0%	32%	47%	1,3	1,3	9,6	TOP10%							
ufso	M	Prof	ECO	4	4	3,0	3,4	1,89	1,27	2,24	0,99	0%	0%	20%	68%	100%	0%	1,3	1,0	16,7	TOP10%							
lhz	M	Prof	ECO	7	6	2,4	2,5	0,70	0,97	0,79	1,08	5%	10%	10%	10%	30%	55%	2,5	1,0	28,6	TOP5%	16	4	76%	24%	15,5	7,1	2,2
dnjn	M	Prof	ECO	4	2	0,8	1,0	0,46	1,23	4,83	1,05	60%	60%	60%	67%	0%	2,4	1,0	86,5	TOP1%	11	0	100%	0%	3,6	7,1	0,5	
skn	M	Prof	ECO	3	2	0,8	0,9	0,60	0,68	0,47	0,98	0%	0%	0%	12%	25%	0%	2,7	1,0	1,3	TOP50%	5	0	100%	0%	2,0	7,1	0,3
tia	M	Prof	ECO	6	4	1,8	1,4	0,90	0,85	0,87	0,93	0%	0%	0%	27%	55%	0%	2,2	1,0	3,9	TOP25%	8	1	96%	4%	4,0	7,1	0,6
idan	F	Seni	ECO	2	1	1,0	0,9	0,00	0,98	0,00	0,89	0%	0%	0%	0%	0%	100%	1,0	1,0	1,2	TOP50%	2	1	10%	90%	3,3	7,1	0,5
ptan	M	Seni	ECO	1	1	1,0	0,6	0,22	1,42	0,31	0,84	0%	0%	0%	0%	13%	0%	1,0	1,0	0,8	<TOP50%	1	0	100%	0%	1,0	7,1	0,1
daan	F	Seni	ECO	4	3	2,5	2,6	0,37	0,89	0,50	0,84	0%	0%	1%	19%	20%	40%	1,2	1,0	4,5	TOP25%	5	0	100%	0%	4,0	7,1	0,6
nkn	M	Seni	ECO			0,0																						
pkv	M	Seni	ECO	2	2	1,0	1,1	0,87	0,75	0,72	1,06	0%	0%	0%	25%	50%	2,0	2,0	2,2	TOP50%	3	1	60%	40%	2,5	7,1	0,4	
nkr	M	Seni	ECO	8	6	4,5	4,9	0,41	1,19	0,37	0,94	0%	0%	0%	8%	22%	56%	1,3	1,0	7,6	TOP25%	4	3	24%	76%	9,8	7,1	1,4
jein	M	Seni	ECO	1	0	0,0	0,0	0,00	0,00	0,00	0,00	0%	0%	0%	0%	0%	0,0	0,0	0,0	<TOP50%	1	0	100%	0%	0,5	7,1	0,1	
mslk	M	Seni	ECO	1	0	0,0	0,0	0,00	0,00	0,00	0,00	0%	0%	0%	0%	0%	0,0	0,0	0,0	<TOP50%	6	0	100%	0%	4,5	7,1	0,6	
alr	M	Seni	ECO	1	0	0,0	0,0	0,00	0,00	0,00	0,00	0%	0%	0%	0%	0%	0,0	0,0	0,0	<TOP50%	3	0	100%	0%	1,5	7,1	0,2	
pms	M	Seni	ECO	6	3	1,5	1,2	1,08	0,53	0,68	0,80	0%	0%	33%	44%	33%	2,0	1,3	2,7	TOP50%	11	0	100%	0%	4,4	7,1	0,6	
npn	M	Seni	ECO	1	1	0,2	0,1	0,65	0,45	0,29	0,95	0%	0%	0%	0%	0%	0%	5,0	1,0	0,2	<TOP50%							
mlsn	M	Seni	ECO	16	14	8,5	8,1	1,10	1,04	0,81	0,98	0%	0%	15%	54%	12%	1,6	1,0	17,6	TOP5%	19	8	43%	57%	20,1	7,1	2,8	
iasa	F	ResA	INF	4	2	0,5	0,5	0,67	1,14	0,84	0,91	0%	0%	19%	67%	0%	4,0	1,0	1,0	<TOP50%	11	2	67%	33%	6,0	7,1	0,8	
agd	M	Prof	INF	12	5	2,3	2,7	0,62	0,86	0,56	1,10	0%	0%	0%	35%	21%	2,1	1,2	4,5	TOP25%	34	7	61%	39%	23,3	7,1	3,3	
fkv	M	Prof	INF	6	5	2,0	1,9	0,42	1,03	0,60	0,97	0%	0%	0%	13%	43%	25%	2,5	1,4	4,0	TOP25%	7	8	19%	81%	14,9	7,1	2,1
grkn	M	Prof	INF	2	1	0,2	0,1	1,40	1,23	1,71	1,35	0%	0%	0%	100%	100%	0%	5,0	1,0	0,7	<TOP50%	8	0	100%	0%	3,3	7,1	0,5
aaas	F	Seni	INF	4	2	0,8	1,0	0,75	1,05	0,50	1,05	0%	0%	0%	39%	0%	2,4	1,0	1,6	TOP50%	11	1	84%	16%	6,1	7,1	0,9	
mha	M	Seni	INF	4	2	1,0	0,9	0,50	0,29	0,15	1,07	0%	0%	0%	0%	50%	2,0	1,0	1,2	TOP50%	11	0	100%	0%	4,0	7,1	0,6	
khn	M	Seni	INF	2	2	0,5	0,5	0,79	1,90	1,60	0,99	0%	0%	0%	50%	100%	0%	4,0	1,5	2,0	TOP50%	10	3	54%	46%	6,5	7,1	0,9
slim	F	Seni	INF			0,0																						
maki	F	Seni	INF			0,0																						
eka	F	Seni	INF	2	1	0,3	0,2	0,47	1,61	0,77	1,11	0%	0%	0%	0%	100%	0%	4,0	2,0	0,6	<TOP50%	4	1	65%	35%	2,2	7,1	0,3
icg	F	Seni	INF	1	1	0,5	0,6	0,00	0,28	0,00	1,04	0%	0%	0%	0%	0%	100%	2,0	1,0	0,8	<TOP50%	3	0	100%	0%	2,0	7,1	0,3
huin	M	Seni	INF	1	0	0	0,0	0,00	0,00	0,00	0,00	0%	0%	0%	0%	0%	0,0	0,0	0,0	<TOP50%	3	1	58%	42%	3,5	7,1	0,5	
kwd	M	Seni	INF																									

PRODUCTION
66,0
PERSONNEL
54
PRODUCTIVITY
1,22

ABBR:
 UNIT See Annex F
 UNIT BUS=Business Administration; ECO=Economics and Statistics; INF=Informatics
 STATUS Prof=Professor; Seni=Senior Lecturer, Asso=Associate Prof, ResA=Research Assoc; Rese=Researcher; Post=Postdoc

NUMBER OF PAPERS (P)	100
Number of papers (articles, letters and reviews) published by UoA "proj_UOA_business_v1" during 2008-2012.	
NUMBER OF FRACTIONALIZED PAPERS (Frac P)	62.3
Sum of author fractionalized papers.	
CITATIONS PER PAPER (CPP)	3.2
Number of citations per paper.	
JOURNAL NORMALIZED CITATION SCORE (NCSj)	0.74
CPP normalized in relation to the UoA "proj_UOA_business_v1" journal set (average=1.00).	
NORMALIZED JOURNAL CITATION SCORE (NJCS)	1.0
The impact of the journal set normalized in relation to its sub-fields (average=1.00).	
FIELD NORMALIZED CITATION SCORE (NCSf)	0.73
CPP normalized in relation to the UoA "proj_UOA_business_v1" sub-field set (average=1.00).	
SUM OF FIELD NORMALIZED CITATION SCORE (Sum NCSf)	45.4
NCSf times Frac P.	
TOP 5 % (TOP5%)	1.35
Percentage of papers above the 95th citation percentile.	
VITALITY	0.97
Mean reference age normalized in relation to the sub-field set (average=1, higher=younger).	



PERCENTAGE NOT CITED PAPERS (PNC) **23**

Percentage of not cited papers during the period.

HIRSCH INDEX (h-index) **9**

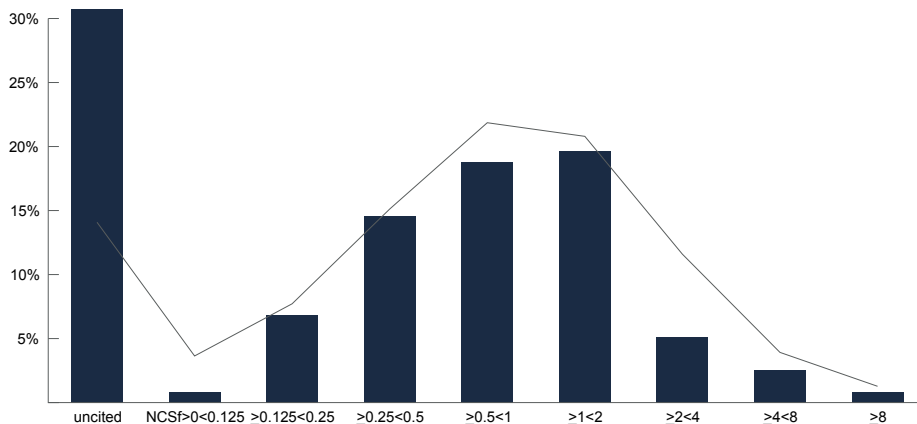
The h number papers that have at least h citations each.

AUTHOR MEAN (A_{Um}) **2.6**

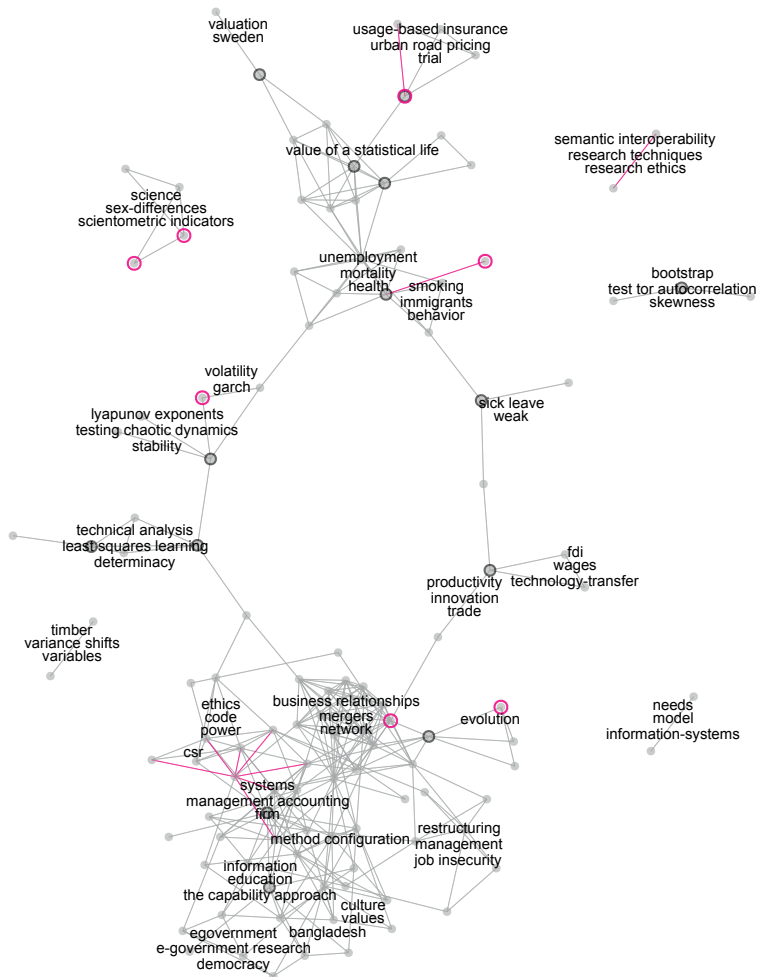
Mean number of authors per paper.

INTERNATIONAL COLLABORATION MEAN (IntCOLL_m) **1.3**

Mean number of countries per paper.



Citation profile: The distribution of field normalized citation score for proj_UOA_business_v1 (bars) compared with all papers attributed to Swedish Universities (line).



The map shows papers (nodes) published by proj_UOA_business_v1.
 Relations (edges) are based on bibliographic coupling.
 Most frequent keywords are displayed for groups of related papers.
 Papers with high field normalized citation score (>3) are marked with a pink border.
 Edges between publications with high vitality (>1.2) are drawn in pink.

MOST FREQUENT JOURNALS

- IND MARKET MANAG (7)
- GOV INFORM Q (5)
- TRANSPORT RES A-POL (4)
- SCAND J MANAG (4)
- INFORM TECHNOL DEV (4)
- MANAGE ACCOUNT RES (3)
- J BUS ETHICS (3)
- INT J FINANC ECON (3)
- ECON MODEL (3)
- SCIENTOMETRICS (2)
- REV WORLD ECON (2)
- RES EVALUAT (2)

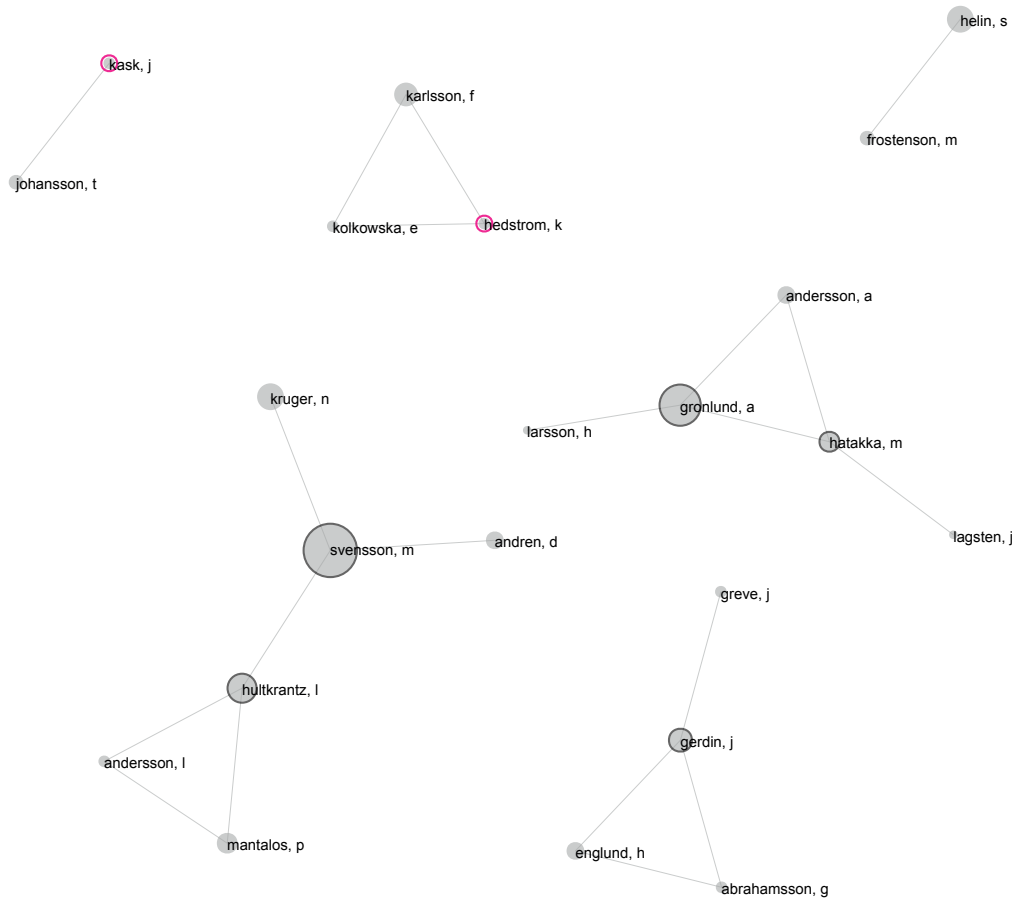
MOST FREQUENT COLLABORATORS

- OREBRO UNIV (90)
- LUND UNIV (15)
- KARLSTAD UNIV (15)
- UPPSALA UNIV (12)
- LINKOPING UNIV (11)
- UMEA UNIV (8)
- STOCKHOLM UNIV (8)
- GOTHENBURG UNIV (7)
- DALARNA UNIV (5)
- RATIO INST (4)
- OREBRO UNIV HOSP (4)
- VTI (3)

MOST FREQUENT SUBFIELDS

- BUSINESS & ECONOMICS (75)
- INFORMATION SCIENCE & LIBRARY SCIENCE (18)
- COMPUTER SCIENCE (12)
- TRANSPORTATION (9)
- SOCIAL SCIENCES - OTHER TOPICS (7)
- MATHEMATICS (6)
- PUBLIC, ENVIRONMENTAL & OCCUPATIONAL HEALTH (5)
- HEALTH CARE SCIENCES & SERVICES (5)
- ENGINEERING (4)
- EDUCATION & EDUCATIONAL RESEARCH (4)
- INTERNATIONAL RELATIONS (3)
- SOCIOLOGY (2)

Faculty of Business, Science and Engineering
Unit of Evaluation: School of Business
COLLABORATION NETWORK



Faculty of Business, Science and Engineering
 Unit of Evaluation: Mathematics and Natural Sciences

Mathematics and Natural Sciences

		WEB OF SCIENCE																DIVA 2008 - 2014										
GEN STA	#P20	#P20	#FRAC	NCS		NJC		NCS		VCS		VCS		TOP		TOP		AU	IntCO	PM	TOP	DIVA	DIVA	DIVA	DIVA	DIVA	DIVA	DIVA
AUID	DER	TUS	UNIT	08-14	08-12	(08-12)	FAP	j	S	f	LITY	1	5	10	25	50	PNC	m	Llm	POINTS	LEVEL	Level1	Level2	%Level1	%Level2	PP	REF	PP/RE
sman	M	ResA	BIOL	9	5	0,7	0,5	0,76	1,17	0,88	1,09	0%	0%	0%	36%	60%	0%	6,7	1,5	1,2	TOP50%	1	0	100%	0%	0,1	6,2	0,0
sfrk	M	ResA	BIOL	12	10	1,3	0,9	1,11	0,86	1,00	0,95	0%	0%	7%	36%	65%	25%	7,4	1,3	3,1	TOP50%	17	1	83%	17%	2,5	6,2	0,4
arr	F	Rese	BIOL	14	7	0,9	0,6	1,42	1,77	2,48	1,10	0%	32%	51%	76%	88%	0%	7,7	2,6	6,1	TOP25%	11	3	57%	43%	3,1	6,2	0,5
afed	M	Prof	BIOL	16	3	1,0	0,8	1,20	1,83	2,19	1,11	0%	33%	33%	67%	100%	0%	3,0	1,0	9,6	TOP10%	8	9	23%	77%	6,9	6,2	1,1
mel	M	Prof	BIOL	19	10	2,0	1,3	0,93	1,14	0,97	1,00	0%	0%	6%	28%	62%	16%	4,9	1,4	3,9	TOP25%	24	6	64%	36%	8,2	6,2	1,3
jis	F	Prof	BIOL	11	8	2,5	1,7	1,85	0,63	0,59	0,98	0%	0%	0%	0%	54%	31%	3,3	1,5	3,4	TOP25%	9	2	79%	21%	3,3	6,2	0,5
pkon	M	Prof	BIOL	21	14	2,9	2,0	0,94	0,96	0,93	0,99	0%	7%	10%	20%	59%	0%	4,8	1,8	7,5	TOP25%	14	10	45%	55%	7,6	6,2	1,2
hnbj	M	Seni	BIOL	5	3	0,7	0,5	0,16	1,21	0,37	1,33	0%	0%	0%	17%	25%	50%	4,5	1,8	0,9	<top50%	2	3	15%	85%	2,2	6,2	0,4
jabd	F	Seni	BIOL	1	1	0,1	0,1	2,53	0,76	1,92	1,05	0%	0%	0%	91%	100%	0%	7,0	4,0	0,6	<top50%	1	1	48%	52%	0,7	6,2	0,1
nsk	M	Seni	BIOL	9	8	1,2	0,8	0,80	0,96	0,85	1,04	0%	16%	16%	16%	39%	0%	6,4	1,6	4,5	TOP25%	8	1	81%	19%	1,7	6,2	0,3
hsgn	M	Prof	CHEM																									
hwg	M	Prof	CHEM	19	14	2,4	1,6	0,51	1,02	0,66	0,91	0%	3%	10%	14%	31%	27%	5,8	1,3	4,0	TOP25%	9	2	61%	39%	2,6	6,2	0,4
iden	F	ResA	CHEM	7	7	1,2	0,9	2,24	1,35	3,23	1,36	4%	32%	63%	89%	100%	0%	6,0	1,7	11,3	TOP10%	7	2	55%	45%	2,2	6,2	0,4
twg	M	ResA	CHEM	50	30	4,2	2,8	2,12	1,75	3,49	1,20	10%	39%	59%	88%	100%	0%	7,1	1,1	74,9	TOP1%	33	46	17%	83%	27,7	6,2	4,5
dfs	M	Post	CHEM	4	4	1,5	1,0	0,22	0,76	0,21	1,18	0%	0%	0%	10%	10%	34%	2,7	1,1	1,6	TOP50%	4	1	79%	21%	2,0	6,2	0,3
mlin	F	Post	CHEM	8	1	0,3	0,2	0,00	1,17	0,00	0,89	0%	0%	0%	0%	100%	3,0	1,0	0,3	<top50%	7	3	40%	60%	3,4	6,2	0,5	
snkn	M	Prof	CHEM	6	3	0,5	0,3	0,99	0,73	0,48	0,95	0%	0%	0%	0%	50%	0%	5,6	1,3	0,4	<top50%	17	2	55%	45%	6,6	6,2	1,1
glm	F	Prof	CHEM	23	16	2,8	1,9	2,35	1,33	2,96	1,24	4%	34%	57%	86%	91%	0%	5,6	1,6	36,4	TOP5%	18	5	53%	47%	6,4	6,2	1,0
aesd	M	Prof	CHEM	26	18	3,6	2,4	0,60	1,11	0,62	1,03	0%	0%	1%	9%	41%	0%	5,0	1,8	4,3	TOP25%	23	10	42%	58%	11,9	6,2	1,9
bvl	M	Prof	CHEM	76	42	7,6	5,1	1,64	1,42	2,33	1,16	2%	27%	37%	62%	85%	3%	5,5	2,1	61,8	TOP1%	60	22	42%	58%	23,4	6,2	3,8
msbm	M	Seni	CHEM	7	2	0,8	0,5	0,62	0,79	0,56	1,04	0%	0%	0%	0%	40%	0%	2,4	1,0	0,9	<top50%	12	0	100%	0%	4,1	6,2	0,7
jahg	F	Seni	CHEM	11	6	2,1	1,4	0,66	1,32	0,86	1,11	0%	0%	8%	35%	40%	12%	2,9	1,2	4,3	<top50%	6	3	21%	79%	5,4	6,2	0,9
ika	F	Seni	CHEM	6	5	0,9	0,6	0,59	0,64	0,37	1,05	0%	0%	0%	0%	31%	0%	5,7	1,2	0,9	<top50%	6	0	100%	0%	1,0	6,2	0,2
ankn	F	Seni	CHEM	21	12	2,2	1,5	1,86	1,29	2,41	1,25	0%	28%	41%	85%	94%	0%	5,4	1,8	15,6	TOP18%	17	5	53%	47%	6,3	6,2	1,0
lsz	F	Seni	CHEM	3	1	0,5	0,3	0,25	0,68	0,18	0,97	0%	0%	0%	0%	0%	0%	2,0	1,0	0,4	<top50%	3	0	100%	0%	1,1	6,2	0,2
pksn	M	Post	MPHY	7	5	2,8	1,8	0,41	0,62	0,24	1,04	0%	0%	0%	0%	5%	0%	1,8	1,4	2,2	TOP30%							
mesr	F	Post	MPHY																									
rmgn	M	Prof	MPHY	7	7	2,3	1,9	0,15	0,66	0,13	0,90	0%	0%	0%	0%	5%	61%	3,0	1,3	2,4	TOP50%							
pejn	M	Prof	MPHY	20	13	3,7	2,8	1,03	2,01	2,08	1,19	3%	13%	21%	77%	97%	0%	3,5	1,4	33,4	TOP5%	6	13	9%	91%	12,8	6,2	2,1
penn	M	Prof	MPHY	5	2	0,8	1,0	0,75	0,73	0,57	1,03	0%	0%	0%	0%	60%	40%	2,4	2,0	1,9	TOP50%	7	7	48%	52%	20,2	6,2	3,3
ekst	M	Assi	MPHY																									
jsd	M	Assi	MPHY	1	1	0,3	0,4	1,37	0,67	0,91	1,14	0%	0%	0%	0%	100%	0%	3,0	1,0	1,0	<top50%							
nen	M	Seni	MPHY	4	4	2,8	2,3	0,46	0,89	0,38	1,15	0%	0%	1%	12%	19%	71%	1,4	1,0	4,1	TOP25%	4	1	65%	35%	4,3	6,2	0,7
ohs	M	Seni	MPHY																									
ylu	M	Seni	MPHY																									
muon	M	Seni	MPHY	12	9	3,6	2,3	0,76	1,04	0,82	1,12	0%	7%	7%	20%	43%	0%	2,5	1,3	8,2	TOP25%	7	6	33%	67%	10,8	6,2	1,7
hst	M	Seni	MPHY																									
blsg	F	Seni	MPHY	1	1	0,3	0,4	1,37	0,67	0,91	1,14	0%	0%	0%	0%	100%	0%	3,0	1,0	1,0	<top50%	2	0	100%	0%	1,3	6,2	0,2
msl	M	Seni	MPHY																									

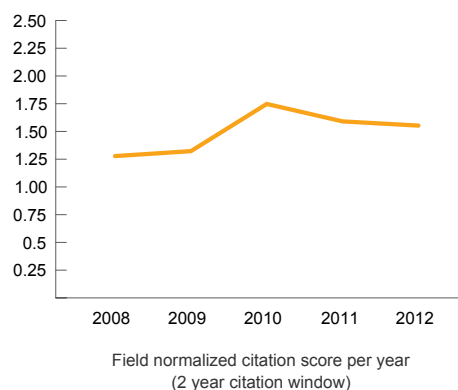
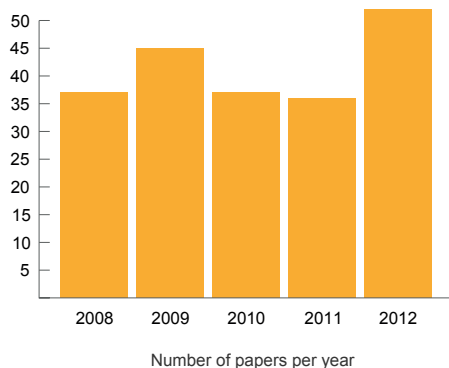
PRODUCTION
42,7
PERSONNEL
39
PRODUCTIVITY
1,09

ABBR:

AUID See Annex F
UNIT BIOL=Biology; CHEM=Chemistry; MPHY=Mathematics, Physics, Didactics in Mathematics, Didactics in Natural Sciences
STATUS STATUS Prof=Professor; Seni=Senior Lecturer; Asso=Associate Prof; ResA=Research Assoc; Rese=Researcher; Post=Postdoc

BIBLIOMETRIC INDICATORS

NUMBER OF PAPERS (P)	207
Number of papers (articles, letters and reviews) published by UoA "proj_UOA_natural_v1" during 2008-2012.	
NUMBER OF FRACTIONALIZED PAPERS (Frac P)	60.8
Sum of author fractionalized papers.	
CITATIONS PER PAPER (CPP)	11.1
Number of citations per paper.	
JOURNAL NORMALIZED CITATION SCORE (NCSj)	1.11
CPP normalized in relation to the UoA "proj_UOA_natural_v1" journal set (average=1.00).	
NORMALIZED JOURNAL CITATION SCORE (NJCS)	1.17
The impact of the journal set normalized in relation to its sub-fields (average=1.00).	
FIELD NORMALIZED CITATION SCORE (NCSf)	1.40
CPP normalized in relation to the UoA "proj_UOA_natural_v1" sub-field set (average=1.00).	
SUM OF FIELD NORMALIZED CITATION SCORE (Sum NCSf)	84.9
NCSf times Frac P.	
TOP 5 % (TOP5%)	12.46
Percentage of papers above the 95th citation percentile.	
VITALITY	1.10
Mean reference age normalized in relation to the sub-field set (average=1, higher=younger).	



BIBLIOMETRIC INDICATORS

PERCENTAGE NOT CITED PAPERS (PNC) **8**

Percentage of not cited papers during the period.

HIRSCH INDEX (h-index) **26**

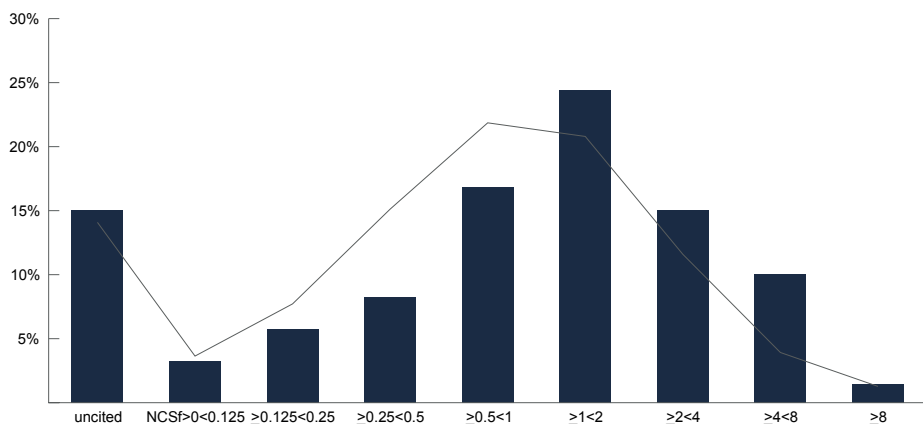
The h number papers that have at least h citations each.

AUTHOR MEAN (A_um) **5.7**

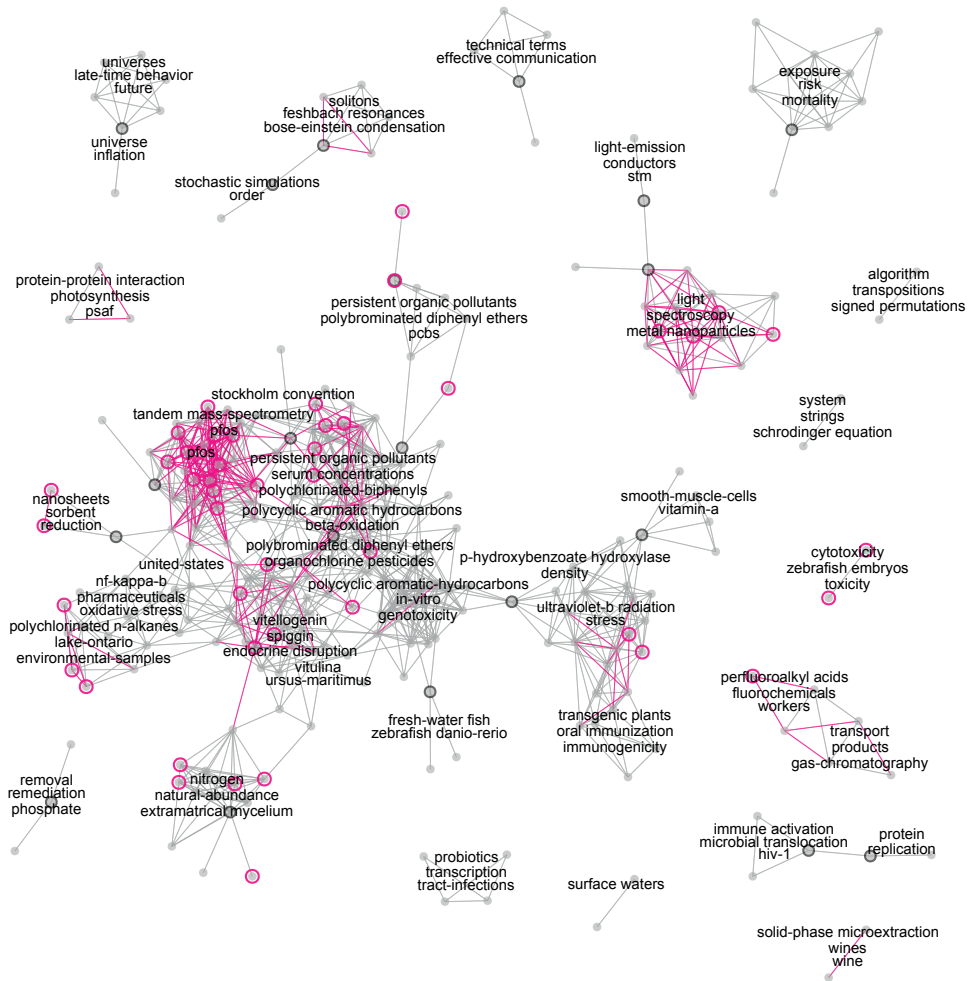
Mean number of authors per paper.

INTERNATIONAL COLLABORATION MEAN (IntCOLLm) **1.7**

Mean number of countries per paper.



Citation profile: The distribution of field normalized citation score for proj_UOA_natural_v1 (bars) compared with all papers attributed to Swedish Universities (line).



The map shows papers (nodes) published by proj_UOA_natural_v1. Relations (edges) are based on bibliographic coupling. Most frequent keywords are displayed for groups of related papers. Papers with high field normalized citation score (>3) are marked with a pink border. Edges between publications with high vitality (>1.2) are drawn in pink.

MOST FREQUENT JOURNALS

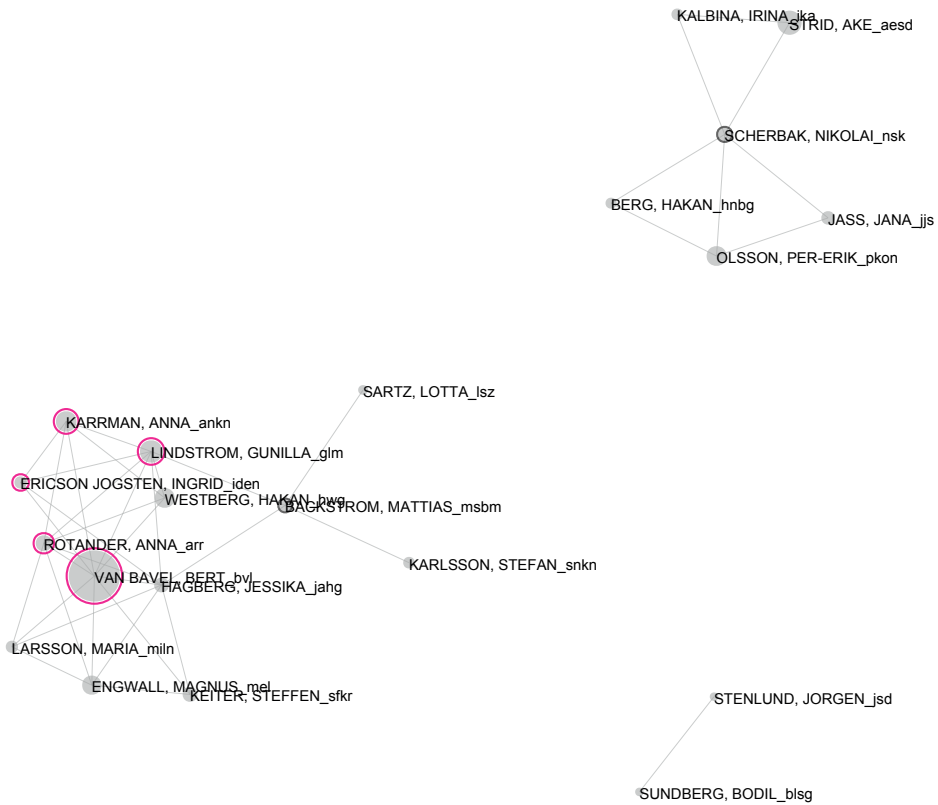
- ENVIRON SCI TECHNOL (24)
- CHEMOSPHERE (19)
- ENVIRON SCI POLLUT R (14)
- ENVIRON INT (14)
- TRAC-TREND ANAL CHEM (10)
- ENVIRON POLLUT (9)
- J CHROMATOGR A (8)
- SOIL BIOL BIOCHEM (5)
- SCI TOTAL ENVIRON (5)
- PHYS REV A (5)
- NANO LETT (5)
- PROTEIN EXPRES PURIF (4)

MOST FREQUENT COLLABORATORS MOST FREQUENT SUBFIELDS

- OREBRO UNIV (221)
- CHINESE ACAD SCI (57)
- UPPSALA UNIV (49)
- OREBRO UNIV HOSP (28)
- GOTHENBURG UNIV (24)
- CHALMERS (22)
- KAROLINSKA INST (20)
- SWEDISH UNIV AGR SCI (19)
- RHEIN WESTFAL TH AACHEN (18)
- HEIDELBERG UNIV (13)
- LUND UNIV (12)
- STOCKHOLM UNIV (10)

- ENVIRONMENTAL SCIENCES & ECOLOGY (106)
- CHEMISTRY (50)
- TOXICOLOGY (30)
- PHYSICS (26)
- BIOCHEMISTRY & MOLECULAR BIOLOGY (22)
- PUBLIC, ENVIRONMENTAL & OCCUPATIONAL HEALTH (21)
- ENGINEERING (21)
- ENVIRONMENTAL SCIENCES (14)
- SCIENCE & TECHNOLOGY - OTHER TOPICS (13)
- AGRICULTURE (13)
- MATERIALS SCIENCE (11)
- OPTICS (10)

Faculty of Business, Science and Engineering
 Unit of Evaluation: Mathematics and Natural Sciences
COLLABORATION NETWORK



Faculty of Business, Science and Engineering
 Unit of Evaluation: Engineering

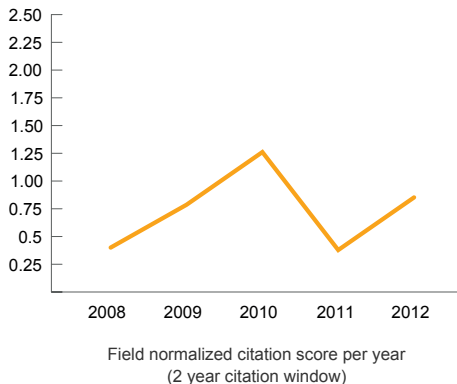
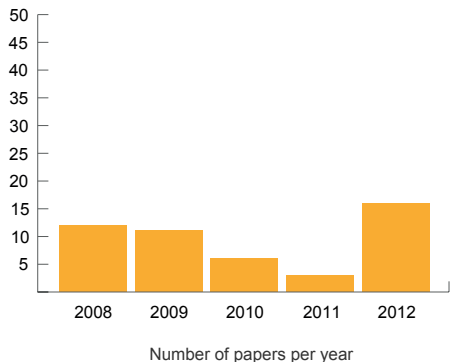
Engineering			WEB OF SCIENCE															DIVA 2008 - 2014											
GEN	STA		#P20	#P20	#FRAC	NCS	NJC	VITA	TOP	TOP	TOP1	TOP2	TOP5	AU	IntCO	PM	TOP	DIVA	DIVA	DIVA	DIVA	DIVA	DIVA	DIVA	DIVA				
AUID	DER	TUS	UNIT	08-14	08-12	(08-12)	FAP	j	S	NCSF	LITY	1	5	0	5	0	PNC	m	LLm	POINTS	LEVEL	Level1	Level2	%Level1	%Level2	PP	REF	F	
tsv	M	ResA	COMP	4	1	0.3	0.2	1.57	2.08	3.25	1.16	0%	0%	100%	100%	100%	0%	4.0	1.0	2.9	TOP50%	10	0	100%	0%	2.3	6.2	0.4	
mco	M	Rese	COMP	3	2	0.5	0.5	0.61	0.85	0.47	1.03	0%	0%	0%	12%	38%	63%	3.8	1.0	0.8	<top50%	13	0	100%	0%	3.9	6.2	0.6	
akv	M	Rese	COMP				0.0															4	0	100%	0%	0.8	6.2	0.1	
rkq	M	Rese	COMP	1	1	0.2	0.2	0.00	0.48	0.00	1.26	0%	0%	0%	0%	0%	100%	6.0	1.0	0.2	<top50%	4	0	100%	0%	1.1	6.2	0.2	
flin	M	Prof	COMP				0.0																						
est	M	Post	COMP	2	0	0.0	0.0	0.00	0.00	0.00	0.00	0%	0%	0%	0%	0%	0%	0.0	0.0	0.0	<top50%	6	0	100%	0%	1.4	6.2	0.2	
ndi	M	Prof	COMP	3	2	0.8	0.8	0.19	0.53	0.14	0.97	0%	0%	0%	0%	6%	60%	2.4	1.6	1.0	<top50%	8	6	33%	67%	6.4	6.2	1.0	
ddv	M	Prof	COMP				0.0															11	0	100%	0%	2.1	6.2	0.3	
lskn	M	Prof	COMP	8	4	1.2	1.1	0.20	0.85	0.15	1.12	0%	0%	0%	3%	56%	3.3	1.0	1.4	TOP50%	20	0	100%	0%	5.1	6.2	0.8		
fkf	F	Prof	COMP	5	4	2.0	1.9	2.03	0.31	0.46	1.03	0%	0%	0%	5%	39%	25%	2.0	1.8	3.0	TOP50%	17	3	65%	35%	11.4	6.2	1.9	
amll	M	Prof	COMP	21	11	3.6	3.4	1.23	1.13	1.37	1.14	0%	0%	12%	44%	84%	0%	3.0	1.7	12.3	TOP10%	50	1	93%	7%	14.7	6.2	2.4	
asaffio	M	Prof	COMP	18	13	4.2	3.8	0.85	0.96	0.84	1.09	0%	0%	0%	30%	57%	28%	3.1	1.5	9.5	TOP10%	32	1	87%	13%	11.1	6.2	1.8	
dsy	M	Prof	COMP	2	2	0.6	0.4	0.00	1.32	0.00	0.88	0%	0%	0%	0%	100%	3.4	1.0	0.5	<top50%	2	0	100%	0%	0.6	6.2	0.1		
aav	M	Seni	COMP				0.0															5	0	100%	0%	1.3	6.2	0.2	
hkan	M	Seni	COMP	7	4	1.3	1.2	1.06	1.47	1.56	1.23	0%	0%	19%	44%	100%	0%	3.0	1.4	5.9	TOP25%	12	1	89%	11%	9.1	6.2	1.5	
jbt	M	Seni	COMP	2	1	0.3	0.2	1.46	1.15	1.70	0.91	0%	0%	0%	100%	100%	0%	4.0	3.0	1.2	TOP50%	8	0	100%	0%	2.0	6.2	0.3	
aba	M	Seni	COMP	3	2	0.5	0.5	0.45	0.74	0.33	1.12	0%	0%	0%	6%	0%	3.8	1.0	0.6	<top50%	5	0	100%	0%	1.4	6.2	0.2		
aako	F	Seni	COMP	2	0	0.0	0.0	0.00	0.00	0.00	0.00	0%	0%	0%	0%	0%	0.0	0.0	0.0	<top50%	5	0	100%	0%	2.1	6.2	0.3		
ali	F	Seni	COMP	16	7	2.2	1.9	1.73	0.73	0.78	1.01	0%	0%	0%	19%	66%	0%	3.2	1.1	4.2	TOP25%	39	0	100%	0%	10.9	6.2	1.8	
mnmn	M	Seni	COMP	4	2	0.5	0.5	1.32	1.69	2.33	1.41	0%	0%	50%	98%	100%	0%	4.0	1.5	4.0	TOP50%	5	0	100%	0%	1.5	6.2	0.2	
fpa	M	Seni	COMP	3	2	0.4	0.3	1.87	0.76	1.43	1.02	0%	0%	0%	63%	100%	0%	5.5	1.5	1.2	TOP50%	14	0	100%	0%	3.1	6.2	0.5	
lpd	M	Prof	MECH	2	2	0.7	0.6	0.00	0.21	0.00	0.93	0%	0%	0%	0%	100%	3.0	1.0	0.8	<top50%	2	0	100%	0%	0.7	6.2	0.1		
btag	M	Assi	MECH				0.0																						
jsen	M	Seni	MECH	2	2	1.0	0.9	0.00	0.96	0.00	0.95	0%	0%	0%	0%	100%	2.0	1.0	1.2	TOP50%	4	0	100%	0%	2.0	6.2	0.3		
snln	M	Seni	MECH				0.0																						
nshn	F	Seni	MECH				0.0																						
crkn	M	Seni	MECH	5	3	0.9	0.7	0.56	0.33	0.14	0.83	0%	0%	0%	0%	27%	3.3	1.6	0.9	<top50%	3	0	100%	0%	0.9	6.2	0.1		

PRODUCTION
19.2
PERSONNEL
27
PRODUCTIVITY
0.71

ABBR:
AUID See Annex F
UNIT COMP=Computer Science; MECH=Mechanical Engineering
STATUS Prof=Professor; Seni=Senior Lecturer; Assi=Assistant Prof; ResA=Research Assoc; Rese=Researcher; Post=Postdoc

BIBLIOMETRIC INDICATORS

NUMBER OF PAPERS (P)	48
Number of papers (articles, letters and reviews) published by UoA "proj_UOA_engineering_v1" during 2008-2012.	
NUMBER OF FRACTIONALIZED PAPERS (Frac P)	21.1
Sum of author fractionalized papers.	
CITATIONS PER PAPER (CPP)	3.3
Number of citations per paper.	
JOURNAL NORMALIZED CITATION SCORE (NCSj)	0.99
CPP normalized in relation to the UoA "proj_UOA_engineering_v1" journal set (average=1.00).	
NORMALIZED JOURNAL CITATION SCORE (NJCS)	0.89
The impact of the journal set normalized in relation to its sub-fields (average=1.00).	
FIELD NORMALIZED CITATION SCORE (NCSf)	0.8
CPP normalized in relation to the UoA "proj_UOA_engineering_v1" sub-field set (average=1.00).	
SUM OF FIELD NORMALIZED CITATION SCORE (Sum NCSf)	16.9
NCSf times Frac P.	
TOP 5 % (TOP5%)	0.0
Percentage of papers above the 95th citation percentile.	
VITALITY	1.07
Mean reference age normalized in relation to the sub-field set (average=1, higher=younger).	



PERCENTAGE NOT CITED PAPERS (PNC) **27**

Percentage of not cited papers during the period.

HIRSCH INDEX (h-index) **7**

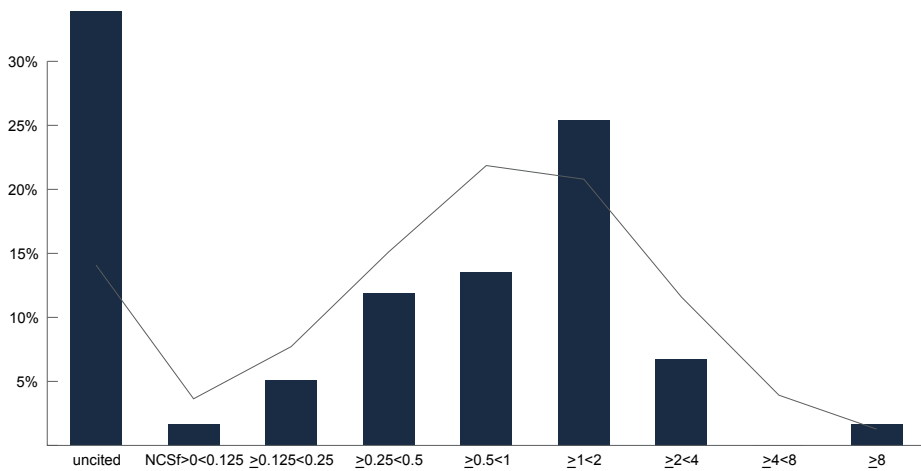
The h number papers that have at least h citations each.

AUTHOR MEAN (AUm) **3.3**

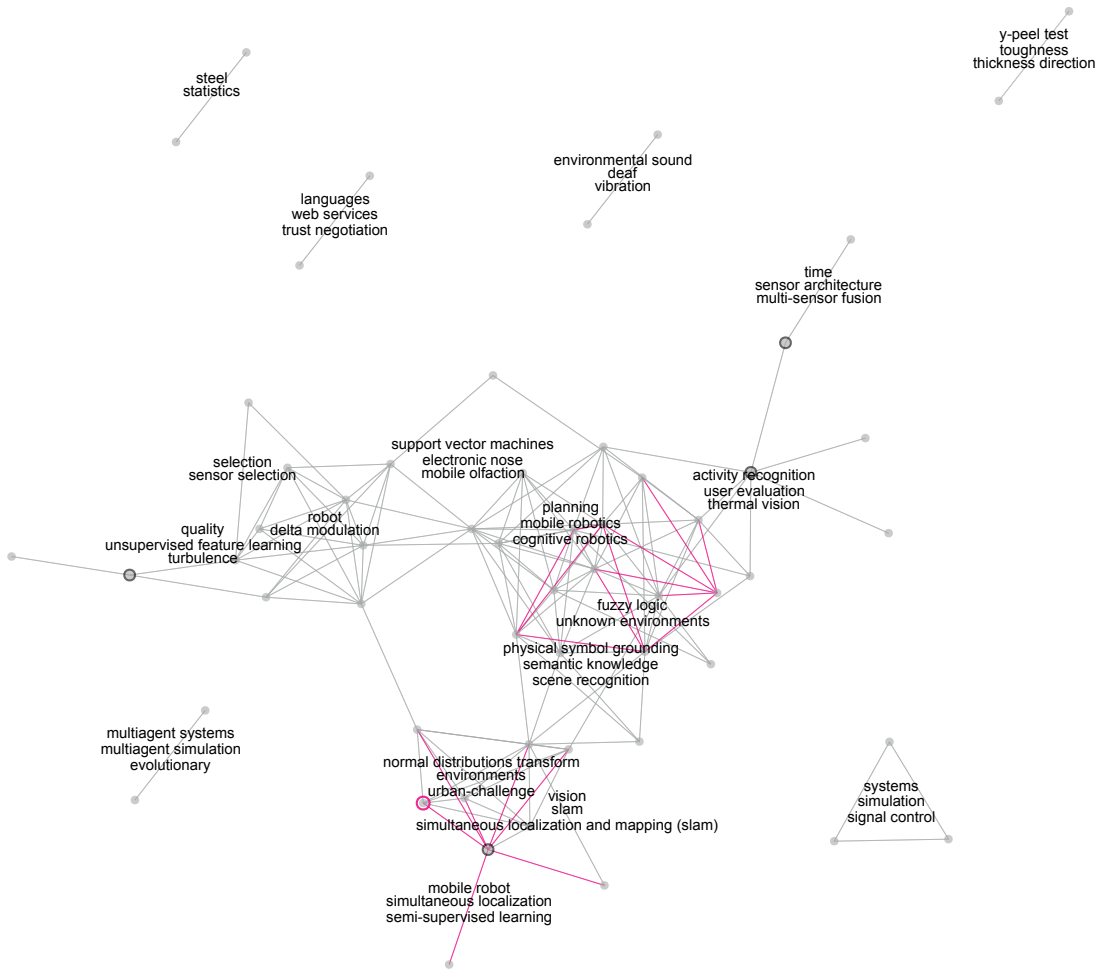
Mean number of authors per paper.

INTERNATIONAL COLLABORATION MEAN (IntCOLLm) **1.5**

Mean number of countries per paper.



Citation profile: The distribution of field normalized citation score for proj_UOA_engineering_v1 (bars) compared with all papers attributed to Swedish Universities (line).



The map shows papers (nodes) published by proj_UOA_engineering_v1.
 Relations (edges) are based on bibliographic coupling.
 Most frequent keywords are displayed for groups of related papers.
 Papers with high field normalized citation score (>3) are marked with a pink border.
 Edges between publications with high vitality (>1.2) are drawn in pink.

MOST FREQUENT JOURNALS

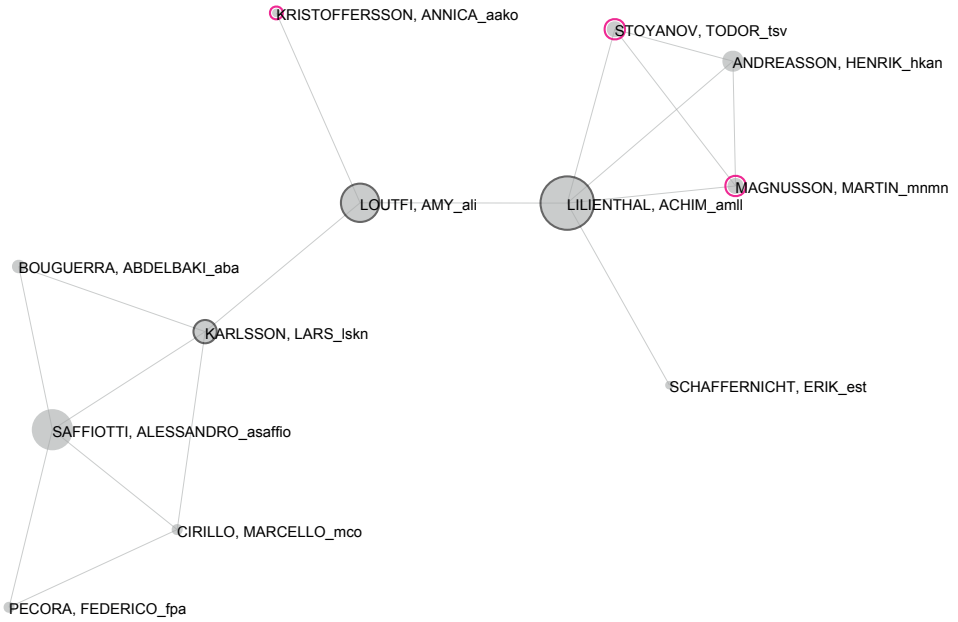
- ROBOT AUTON SYST (10)
- SENSORS-BASEL (6)
- SENSOR ACTUAT B-CHEM (2)
- PERVASIVE MOB COMPUT (2)
- J FIELD ROBOT (2)
- J AMB INTEL SMART EN (2)
- J ADHES SCI TECHNOL (2)
- INT J ROBOT RES (2)
- INT J ARTIF INTELL T (2)
- ELECTRON LETT (2)
- STEEL RES INT (1)
- ROBOTICA (1)

MOST FREQUENT COLLABORATORS

- OREBRO UNIV (54)
- MALAGA UNIV (4)
- KARLSTAD UNIV (4)
- LINCOLN UNIV (3)
- VOLVO AERO CORP (2)
- TECH UNIV DENMARK (2)
- SASTRA UNIV (2)
- OREBRO UNIV HOSP (2)
- BAM FED INST MAT RES & TESTING (2)
- XLAB DOO (1)
- WURZBURG UNIV (1)
- WEST UNIV (1)

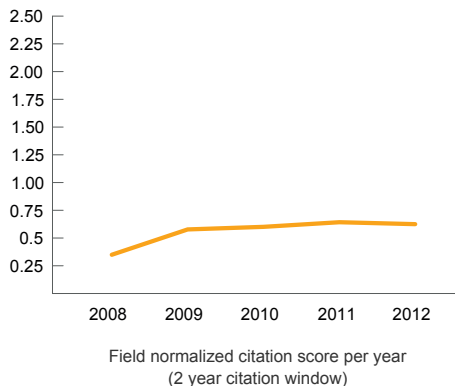
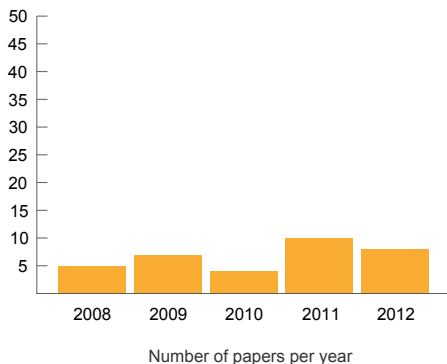
MOST FREQUENT SUBFIELDS

- COMPUTER SCIENCE (33)
- ROBOTICS (22)
- AUTOMATION & CONTROL SYSTEMS (13)
- ENGINEERING (12)
- INSTRUMENTS & INSTRUMENTATION (8)
- ELECTROCHEMISTRY (8)
- CHEMISTRY (8)
- TELECOMMUNICATIONS (6)
- MATERIALS SCIENCE (4)
- MECHANICS (2)
- REHABILITATION (1)
- OTORHINOLARYNGOLOGY (1)



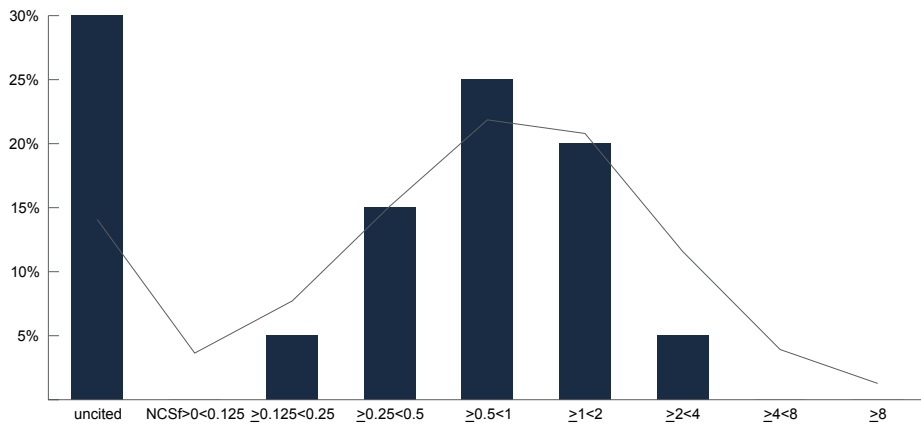
BIBLIOMETRIC INDICATORS

NUMBER OF PAPERS (P)	34
Number of papers (articles, letters and reviews) published by UoA "PROJ_BUS ADM_V1" during 2008-2012.	
NUMBER OF FRACTIONALIZED PAPERS (Frac P)	19.8
Sum of author fractionalized papers.	
CITATIONS PER PAPER (CPP)	2.9
Number of citations per paper.	
JOURNAL NORMALIZED CITATION SCORE (NCSj)	0.57
CPP normalized in relation to the UoA "PROJ_BUS ADM_V1" journal set (average=1.00).	
NORMALIZED JOURNAL CITATION SCORE (NJCS)	1.05
The impact of the journal set normalized in relation to its sub-fields (average=1.00).	
FIELD NORMALIZED CITATION SCORE (NCSf)	0.63
CPP normalized in relation to the UoA "PROJ_BUS ADM_V1" sub-field set (average=1.00).	
SUM OF FIELD NORMALIZED CITATION SCORE (Sum NCSf)	12.5
NCSf times Frac P.	
TOP 5 % (TOP5%)	0.35
Percentage of papers above the 95th citation percentile.	
VITALITY	0.97
Mean reference age normalized in relation to the sub-field set (average=1, higher=younger).	



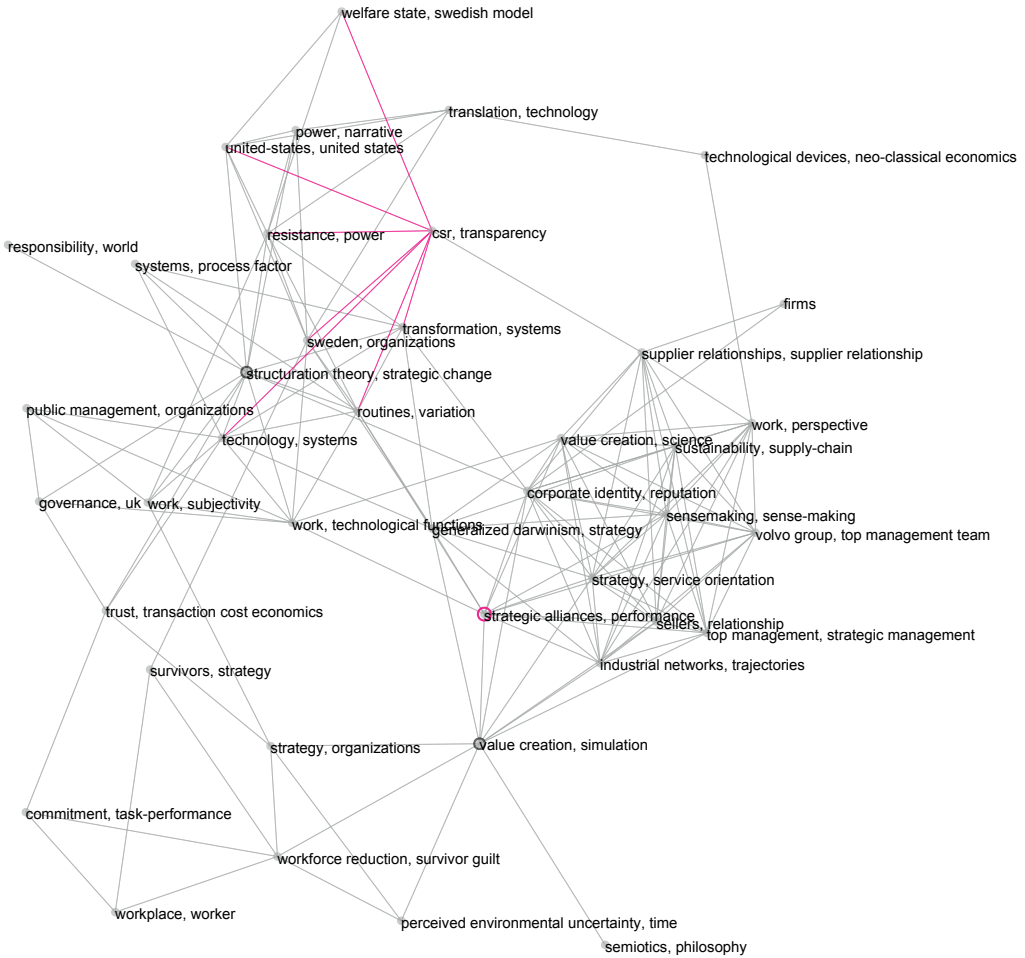
BIBLIOMETRIC INDICATORS

PERCENTAGE NOT CITED PAPERS (PNC)	21
Percentage of not cited papers during the period.	
HIRSCH INDEX (h-index)	7
The h number papers that have at least h citations each.	
AUTHOR MEAN (A_{Um})	2.4
Mean number of authors per paper.	
INTERNATIONAL COLLABORATION MEAN (IntCOLL_m)	1.3
Mean number of countries per paper.	



Citation profile: The distribution of field normalized citation score for PROJ_BUS ADM_V1 (bars) compared with all papers attributed to Swedish Universities (line).

PUBLICATION PROFILE



The map shows papers (nodes) published by PROJ_BUS ADM_V1.
 Relations (edges) are based on bibliographic coupling.
 Most frequent keywords are displayed for groups of related papers.
 Papers with high field normalized citation score (>3) are marked with a pink border.
 Edges between publications with high vitality (>1.2) are drawn in pink.

MOST FREQUENT JOURNALS

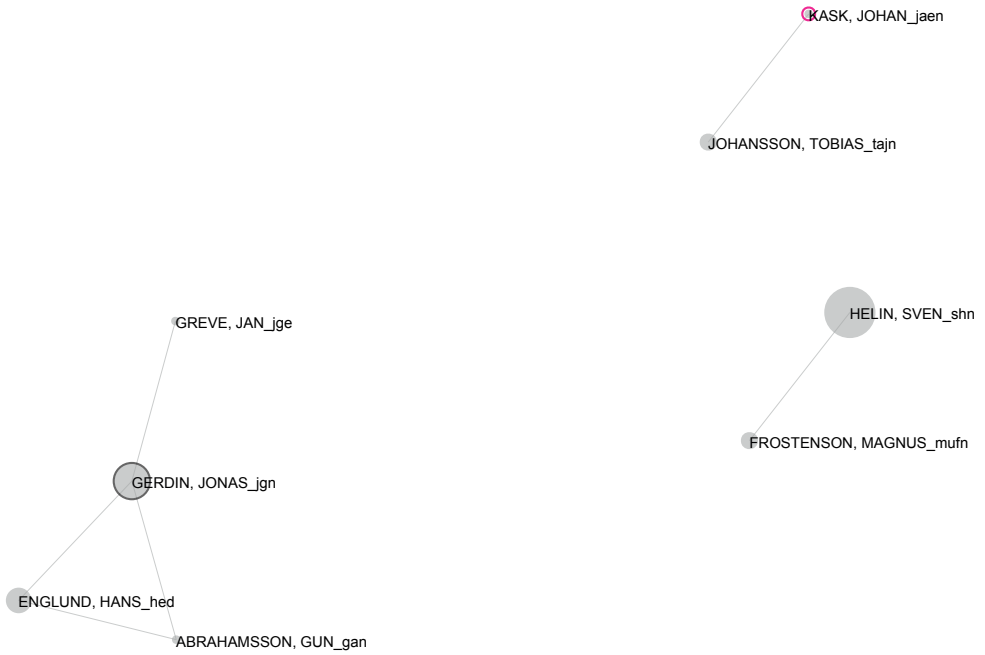
- IND MARKET MANAG (7)
- SCAND J MANAG (4)
- MANAGE ACCOUNT RES (3)
- J BUS ETHICS (3)
- ORGAN STUD (2)
- J MANAGE ORGAN (2)
- ACCOUNT ORG SOC (2)
- ACCOUNT AUDIT ACCOUN (2)
- THEOR SOC (1)
- THEOR PSYCHOL (1)
- SERV IND J (1)
- PUBLIC ADMIN (1)

MOST FREQUENT COLLABORATORS

- OREBRO UNIV (25)
- LUND UNIV (10)
- STOCKHOLM UNIV (5)
- LINKOPING UNIV (5)
- UPPSALA UNIV (3)
- GOTHENBURG UNIV (3)
- EXETER UNIV (3)
- UMEA UNIV (2)
- REGENT UNIV (2)
- NORWEGIAN SCH MANAGEMENT BI (2)
- NEWCASTLE UNIV (2)
- LULEA UNIV TECHNOL (2)

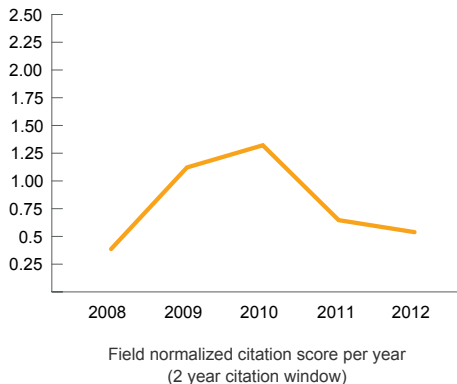
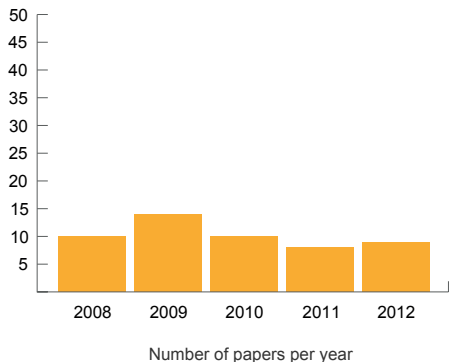
MOST FREQUENT SUBFIELDS

- BUSINESS & ECONOMICS (35)
- SOCIAL SCIENCES - OTHER TOPICS (4)
- SOCIOLOGY (2)
- PSYCHOLOGY (2)
- PUBLIC ADMINISTRATION (1)
- OPERATIONS RESEARCH & MANAGEMENT SCIENCE (1)
- GOVERNMENT & LAW (1)
- ENGINEERING (1)
- ANTHROPOLOGY (1)



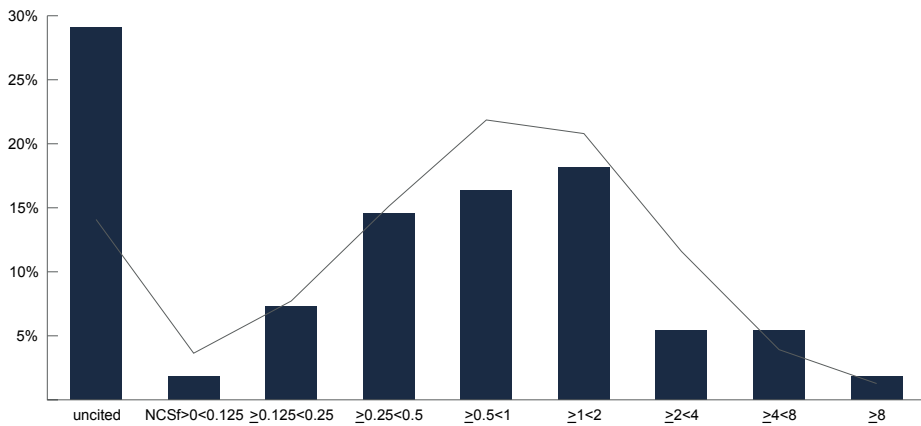
BIBLIOMETRIC INDICATORS

NUMBER OF PAPERS (P)	51
Number of papers (articles, letters and reviews) published by UoA "PROJ_ECONOMICS_V1" during 2008-2012.	
NUMBER OF FRACTIONALIZED PAPERS (Frac P)	34.4
Sum of author fractionalized papers.	
CITATIONS PER PAPER (CPP)	3.7
Number of citations per paper.	
JOURNAL NORMALIZED CITATION SCORE (NCSj)	0.88
CPP normalized in relation to the UoA "PROJ_ECONOMICS_V1" journal set (average=1.00).	
NORMALIZED JOURNAL CITATION SCORE (NJCS)	0.98
The impact of the journal set normalized in relation to its sub-fields (average=1.00).	
FIELD NORMALIZED CITATION SCORE (NCSf)	0.82
CPP normalized in relation to the UoA "PROJ_ECONOMICS_V1" sub-field set (average=1.00).	
SUM OF FIELD NORMALIZED CITATION SCORE (Sum NCSf)	28.0
NCSf times Frac P.	
TOP 5 % (TOP5%)	2.25
Percentage of papers above the 95th citation percentile.	
VITALITY	0.95
Mean reference age normalized in relation to the sub-field set (average=1, higher=younger).	



BIBLIOMETRIC INDICATORS

PERCENTAGE NOT CITED PAPERS (PNC)	25
Percentage of not cited papers during the period.	
HIRSCH INDEX (h-index)	7
The h number papers that have at least h citations each.	
AUTHOR MEAN (A_{um})	2.7
Mean number of authors per paper.	
INTERNATIONAL COLLABORATION MEAN (IntCOLL_m)	1.4
Mean number of countries per paper.	



Citation profile: The distribution of field normalized citation score for PROJ_ECONOMICS_V1 (bars) compared with all papers attributed to Swedish Universities (line).

PUBLICATION PROFILE



The map shows papers (nodes) published by PROJ_ECONOMICS_V1. Relations (edges) are based on bibliographic coupling. Most frequent keywords are displayed for groups of related papers. Papers with high field normalized citation score (>3) are marked with a pink border. Edges between publications with high vitality (>1.2) are drawn in pink.

MOST FREQUENT JOURNALS

- TRANSPORT RES A-POL (4)
- INT J FINANC ECON (3)
- ECON MODEL (3)
- SCIENTOMETRICS (2)
- REV WORLD ECON (2)
- RES EVALUAT (2)
- J OCCUP REHABIL (2)
- IND CORP CHANGE (2)
- APPL ECON LETT (2)
- APPL ECON (2)
- ACCIDENT ANAL PREV (2)
- WORLD ECON (1)

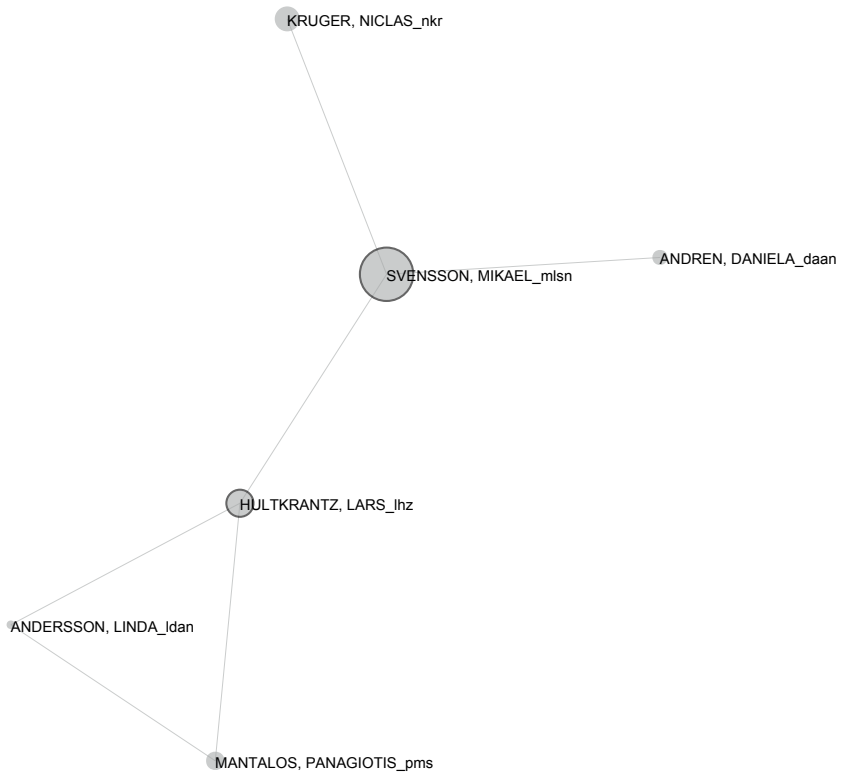
MOST FREQUENT COLLABORATORS

- OREBRO UNIV (43)
- KARLSTAD UNIV (14)
- UMEA UNIV (6)
- LUND UNIV (5)
- LINKOPING UNIV (5)
- RATIO INST (4)
- OREBRO UNIV HOSP (4)
- GOTHENBURG UNIV (4)
- DALARNA UNIV (4)
- VTI (3)
- UPPSALA UNIV (3)
- STOCKHOLM UNIV (3)

MOST FREQUENT SUBFIELDS

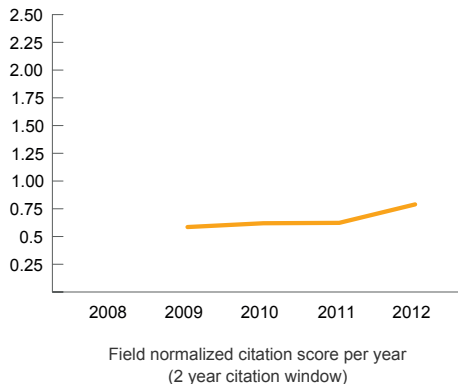
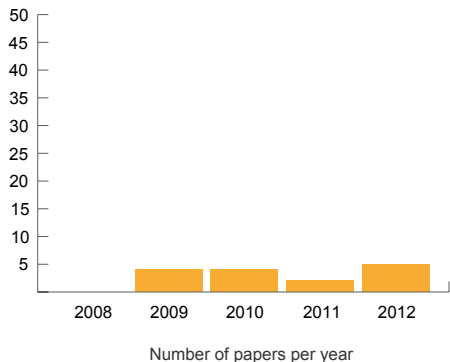
- BUSINESS & ECONOMICS (40)
- TRANSPORTATION (9)
- MATHEMATICS (6)
- PUBLIC, ENVIRONMENTAL & OCCUPATIONAL HEALTH (5)
- INFORMATION SCIENCE & LIBRARY SCIENCE (4)
- SOCIAL SCIENCES - OTHER TOPICS (3)
- INTERNATIONAL RELATIONS (3)
- HEALTH CARE SCIENCES & SERVICES (3)
- ENGINEERING (3)
- COMPUTER SCIENCE (3)
- SOCIAL ISSUES (2)
- REHABILITATION (2)

COLLABORATION NETWORK



BIBLIOMETRIC INDICATORS

NUMBER OF PAPERS (P)	15
Number of papers (articles, letters and reviews) published by UoA "PROJ_INFORMATICS_V1" during 2008-2012.	
NUMBER OF FRACTIONALIZED PAPERS (Frac P)	8.1
Sum of author fractionalized papers.	
CITATIONS PER PAPER (CPP)	1.7
Number of citations per paper.	
JOURNAL NORMALIZED CITATION SCORE (NCSj)	0.56
CPP normalized in relation to the UoA "PROJ_INFORMATICS_V1" journal set (average=1.00).	
NORMALIZED JOURNAL CITATION SCORE (NJCS)	0.93
The impact of the journal set normalized in relation to its sub-fields (average=1.00).	
FIELD NORMALIZED CITATION SCORE (NCSf)	0.6
CPP normalized in relation to the UoA "PROJ_INFORMATICS_V1" sub-field set (average=1.00).	
SUM OF FIELD NORMALIZED CITATION SCORE (Sum NCSf)	4.8
NCSf times Frac P.	
TOP 5 % (TOP5%)	0.0
Percentage of papers above the 95th citation percentile.	
VITALITY	1.04
Mean reference age normalized in relation to the sub-field set (average=1, higher=younger).	



BIBLIOMETRIC INDICATORS

PERCENTAGE NOT CITED PAPERS (PNC) **20**

Percentage of not cited papers during the period.

HIRSCH INDEX (h-index) **3**

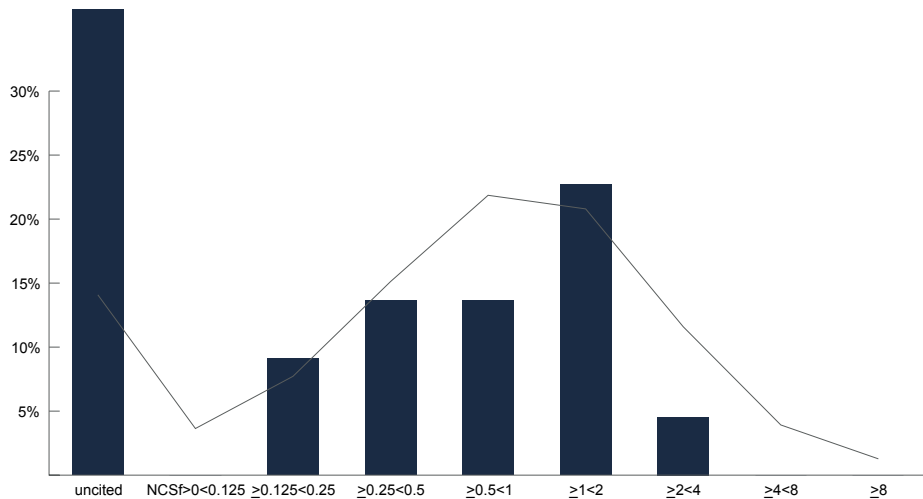
The h number papers that have at least h citations each.

AUTHOR MEAN (A_{um}) **2.9**

Mean number of authors per paper.

INTERNATIONAL COLLABORATION MEAN (IntCOLL_m) **1.2**

Mean number of countries per paper.



Citation profile: The distribution of field normalized citation score for PROJ_INFORMATICS_V1 (bars) compared with all papers attributed to Swedish Universities (line).

PUBLICATION PROFILE



The map shows papers (nodes) published by PROJ_INFORMATICS_V1.
 Relations (edges) are based on bibliographic coupling.
 Most frequent keywords are displayed for groups of related papers.
 Papers with high field normalized citation score (>3) are marked with a pink border.
 Edges between publications with high vitality (>1.2) are drawn in pink.

MOST FREQUENT JOURNALS

- GOV INFORM Q (5)
- INFORM TECHNOL DEV (4)
- EUR J INFORM SYST (2)
- COMPUT EDUC (2)
- TELEMED J E-HEALTH (1)
- LEARN MEDIA TECHNOL (1)
- J STRATEGIC INF SYST (1)
- J INTERN MED (1)
- J DATABASE MANAGE (1)
- INT J MED INFORM (1)
- INFORM TECHNOL PEOP (1)
- INFORM SOFTWARE TECH (1)

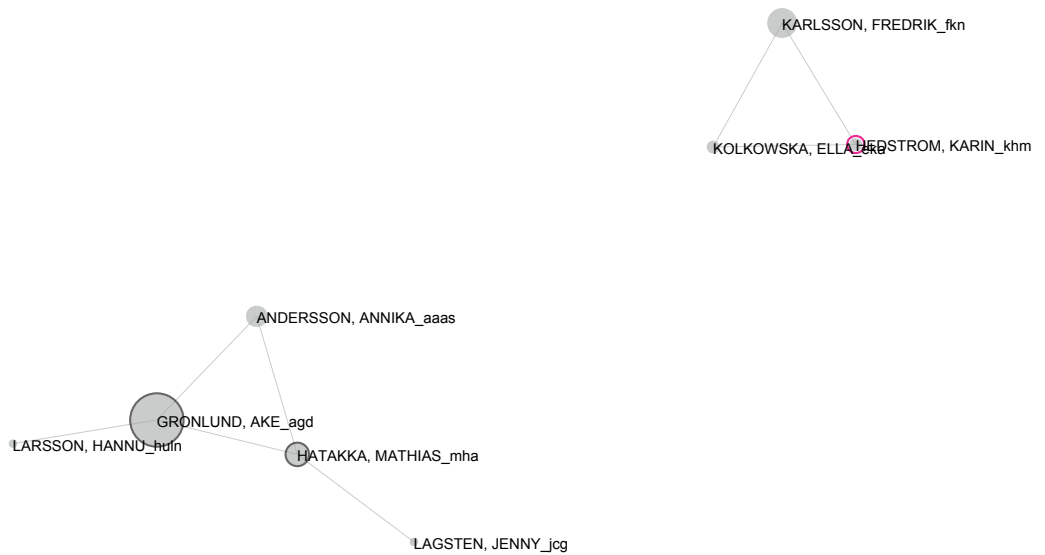
MOST FREQUENT COLLABORATORS

- OREBRO UNIV (22)
- UPPSALA UNIV (6)
- SKOVDE UNIV (2)
- KAROLINSKA INST (2)
- VIRGINIA COMMONWEALTH UNIV (1)
- UCL (1)
- SCI & TECHNOL UNIV (1)
- SANOFI R&D (1)
- SAN FRANCISCO UNIV (1)
- PARIS DESCARTES UNIV (1)
- MUNSTER UNIV (1)
- LINKOPING UNIV (1)

MOST FREQUENT SUBFIELDS

- INFORMATION SCIENCE & LIBRARY SCIENCE (14)
- COMPUTER SCIENCE (9)
- EDUCATION & EDUCATIONAL RESEARCH (3)
- MEDICAL INFORMATICS (2)
- HEALTH CARE SCIENCES & SERVICES (2)
- GENERAL & INTERNAL MEDICINE (1)

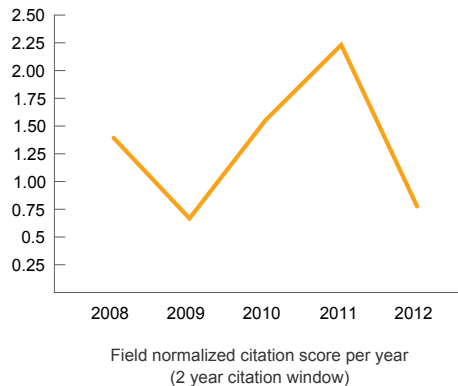
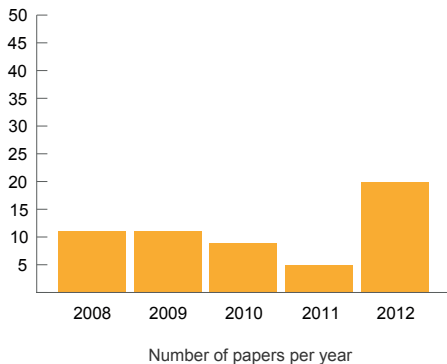
COLLABORATION NETWORK



Subunit: Biology

BIBLIOMETRIC INDICATORS

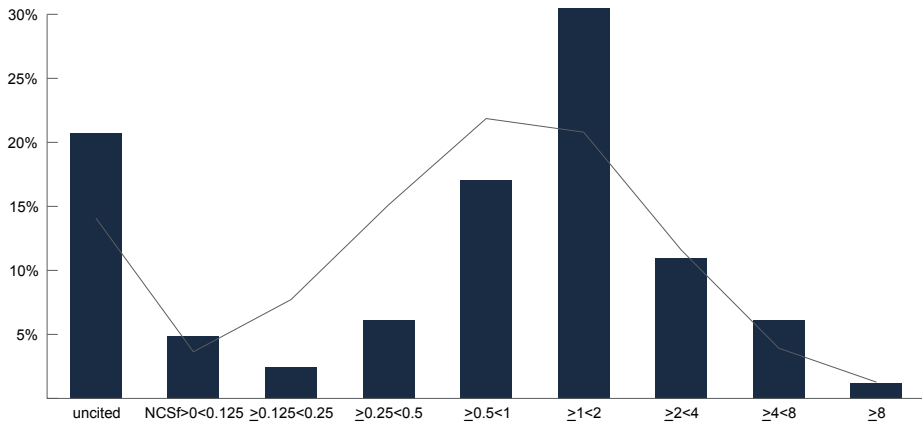
NUMBER OF PAPERS (P)	56
Number of papers (articles, letters and reviews) published by UoA "PROJ_BIOLOGY_V1" during 2008-2012.	
NUMBER OF FRACTIONALIZED PAPERS (Frac P)	13.3
Sum of author fractionalized papers.	
CITATIONS PER PAPER (CPP)	9.0
Number of citations per paper.	
JOURNAL NORMALIZED CITATION SCORE (NCSj)	1.13
CPP normalized in relation to the UoA "PROJ_BIOLOGY_V1" journal set (average=1.00).	
NORMALIZED JOURNAL CITATION SCORE (NJCS)	1.06
The impact of the journal set normalized in relation to its sub-fields (average=1.00).	
FIELD NORMALIZED CITATION SCORE (NCSf)	1.06
CPP normalized in relation to the UoA "PROJ_BIOLOGY_V1" sub-field set (average=1.00).	
SUM OF FIELD NORMALIZED CITATION SCORE (Sum NCSf)	14.1
NCSf times Frac P.	
TOP 5 % (TOP5%)	7.71
Percentage of papers above the 95th citation percentile.	
VITALITY	1.03
Mean reference age normalized in relation to the sub-field set (average=1, higher=younger).	



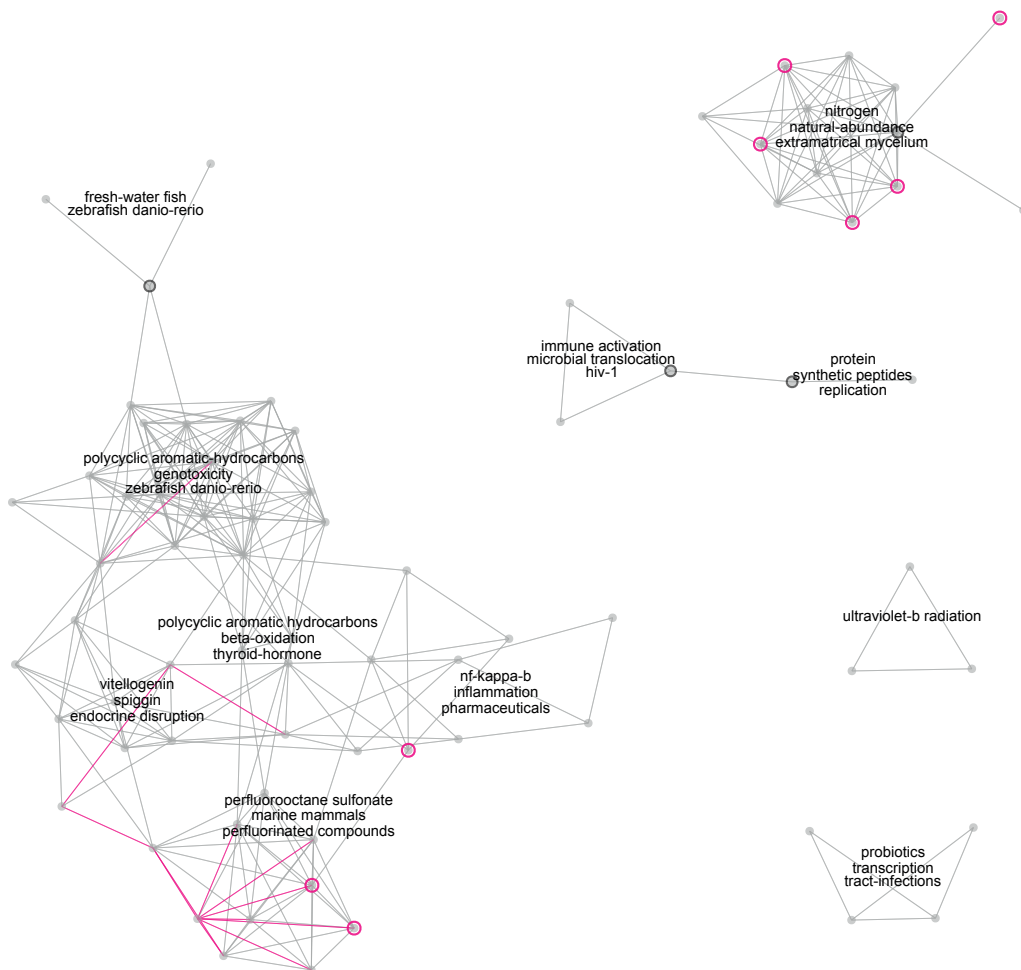
Subunit: Biology

BIBLIOMETRIC INDICATORS

PERCENTAGE NOT CITED PAPERS (PNC)	9
Percentage of not cited papers during the period.	
HIRSCH INDEX (h-index)	14
The h number papers that have at least h citations each.	
AUTHOR MEAN (AUm)	6.5
Mean number of authors per paper.	
INTERNATIONAL COLLABORATION MEAN (IntCOLLm)	1.8
Mean number of countries per paper.	



Citation profile: The distribution of field normalized citation score for PROJ_BIOLOGY_V1 (bars) compared with all papers attributed to Swedish Universities (line).



The map shows papers (nodes) published by PROJ_BIOLOGY_V1. Relations (edges) are based on bibliographic coupling. Most frequent keywords are displayed for groups of related papers. Papers with high field normalized citation score (>3) are marked with a pink border. Edges between publications with high vitality (>1.2) are drawn in pink.

MOST FREQUENT JOURNALS

ENVIRON SCI POLLUT R (10)
 SOIL BIOL BIOCHEM (5)
 SCI TOTAL ENVIRON (4)
 ENVIRON TOXICOL CHEM (4)
 ENVIRON INT (4)
 AQUAT TOXICOL (3)
 REPROD TOXICOL (2)
 REPROD BIOL ENDOCRIN (2)
 J SUSTAIN AGR (2)
 J SOIL SEDIMENT (2)
 ENVIRON SCI TECHNOL (2)
 CHEMOSPHERE (2)

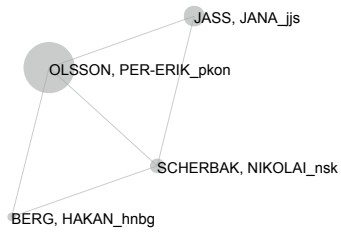
MOST FREQUENT COLLABORATORS

OREBRO UNIV (79)
 RHEIN WESTFAL TH AACHEN (18)
 SWEDISH UNIV AGR SCI (14)
 HEIDELBERG UNIV (13)
 SASKATCHEWAN UNIV (8)
 LUND UNIV (8)
 GOTHENBURG UNIV (8)
 WESTERN ONTARIO UNIV (7)
 UPPSALA UNIV (7)
 STOCKHOLM UNIV (6)
 KAROLINSKA INST (6)
 OREBRO UNIV HOSP (5)

MOST FREQUENT SUBFIELDS

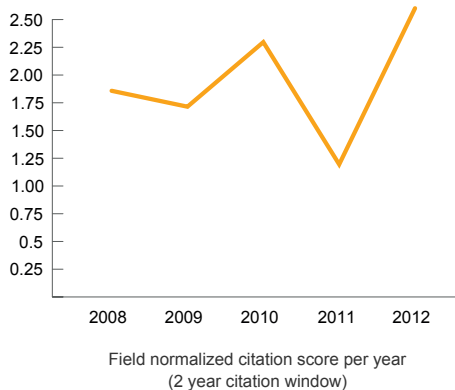
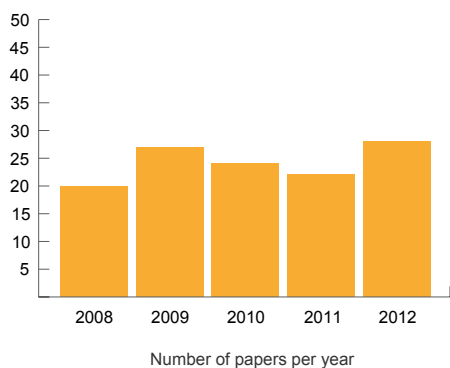
ENVIRONMENTAL SCIENCES & ECOLOGY (37)
 TOXICOLOGY (15)
 AGRICULTURE (10)
 BIOCHEMISTRY & MOLECULAR BIOLOGY (8)
 REPRODUCTIVE BIOLOGY (6)
 MICROBIOLOGY (5)
 IMMUNOLOGY (5)
 VIROLOGY (4)
 ENGINEERING (4)
 ENDOCRINOLOGY & METABOLISM (4)
 BIOTECHNOLOGY & APPLIED MICROBIOLOGY (4)
 MARINE & FRESHWATER BIOLOGY (3)

COLLABORATION NETWORK



BIBLIOMETRIC INDICATORS

NUMBER OF PAPERS (P)	121
Number of papers (articles, letters and reviews) published by UoA "PROJ_CHEMISTRY_V1" during 2008-2012.	
NUMBER OF FRACTIONALIZED PAPERS (Frac P)	30.7
Sum of author fractionalized papers.	
CITATIONS PER PAPER (CPP)	15.1
Number of citations per paper.	
JOURNAL NORMALIZED CITATION SCORE (NCSj)	1.35
CPP normalized in relation to the UoA "PROJ_CHEMISTRY_V1" journal set (average=1.00).	
NORMALIZED JOURNAL CITATION SCORE (NJCS)	1.27
The impact of the journal set normalized in relation to its sub-fields (average=1.00).	
FIELD NORMALIZED CITATION SCORE (NCSf)	1.86
CPP normalized in relation to the UoA "PROJ_CHEMISTRY_V1" sub-field set (average=1.00).	
SUM OF FIELD NORMALIZED CITATION SCORE (Sum NCSf)	57.0
NCSf times Frac P.	
TOP 5 % (TOP5%)	18.92
Percentage of papers above the 95th citation percentile.	
VITALITY	1.13
Mean reference age normalized in relation to the sub-field set (average=1, higher=younger).	



BIBLIOMETRIC INDICATORS

PERCENTAGE NOT CITED PAPERS (PNC) **5**

Percentage of not cited papers during the period.

HIRSCH INDEX (h-index) **25**

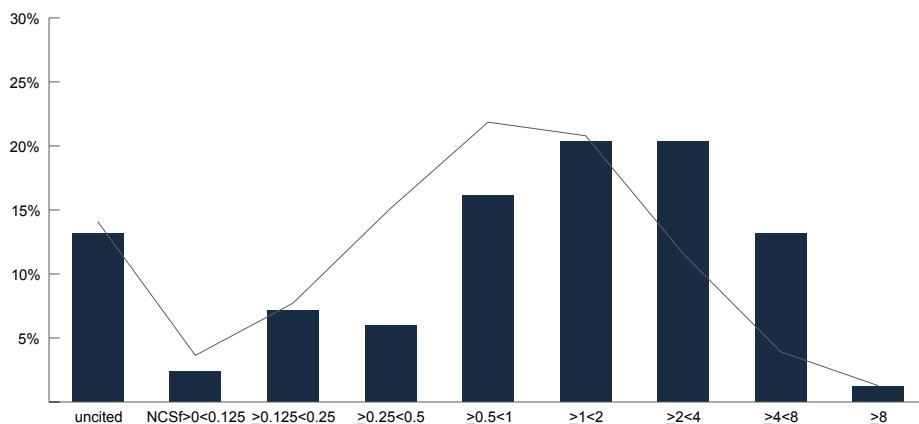
The h number papers that have at least h citations each.

AUTHOR MEAN (A_{Um}) **6.4**

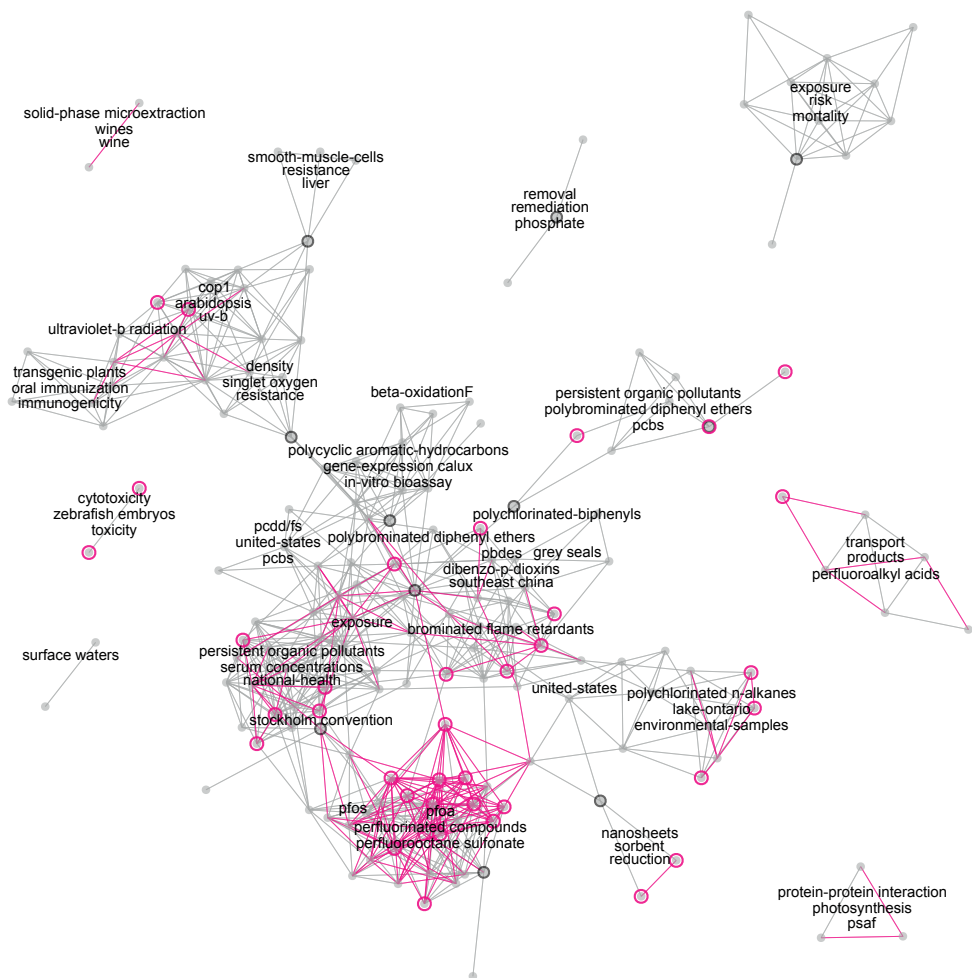
Mean number of authors per paper.

INTERNATIONAL COLLABORATION MEAN (IntCOLL_m) **1.8**

Mean number of countries per paper.



Citation profile: The distribution of field normalized citation score for PROJ_CHEMISTRY_V1 (bars) compared with all papers attributed to Swedish Universities (line).



The map shows papers (nodes) published by PROJ_CHEMISTRY_V1.
 Relations (edges) are based on bibliographic coupling.
 Most frequent keywords are displayed for groups of related papers.
 Papers with high field normalized citation score (>3) are marked with a pink border.
 Edges between publications with high vitality (>1.2) are drawn in pink.

MOST FREQUENT JOURNALS

- ENVIRON SCI TECHNOL (24)
- CHEMOSPHERE (19)
- ENVIRON INT (13)
- TRAC-TREND ANAL CHEM (10)
- ENVIRON SCI POLLUT R (9)
- ENVIRON POLLUT (9)
- J CHROMATOGR A (8)
- PROTEIN EXPRES PURIF (4)
- INT ARCH OCC ENV HEA (4)
- SCI TOTAL ENVIRON (3)
- J PHYS CHEM B (3)
- J OCCUP ENVIRON MED (3)

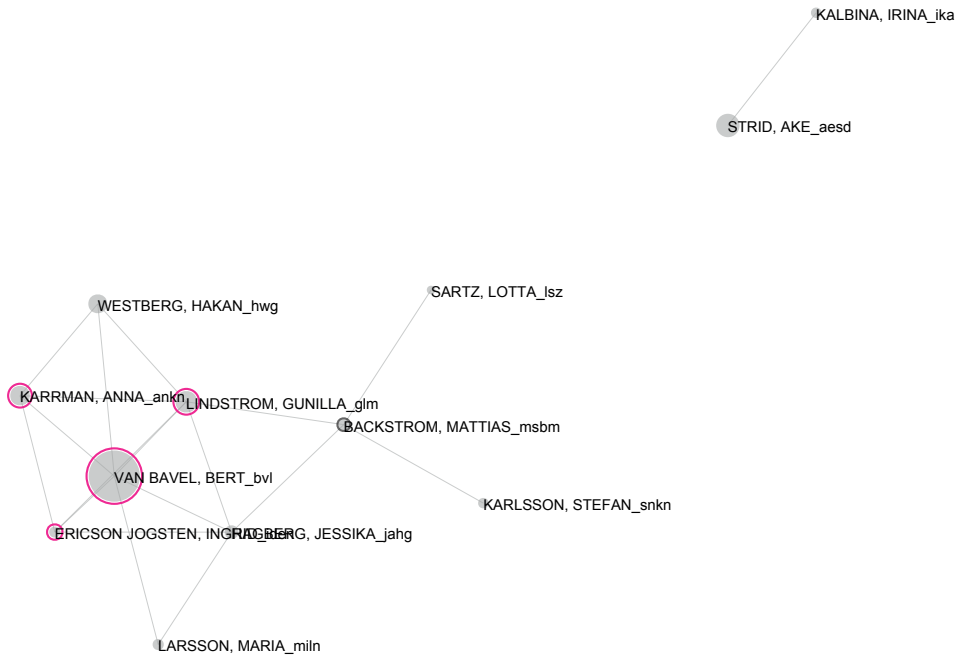
MOST FREQUENT COLLABORATORS

- OREBRO UNIV (154)
- CHINESE ACAD SCI (56)
- UPPSALA UNIV (43)
- OREBRO UNIV HOSP (28)
- GOTHENBURG UNIV (15)
- KAROLINSKA INST (14)
- SASKATCHEWAN UNIV (8)
- ROVIRA & VIRGILI UNIV (8)
- VRIJE UNIV AMSTERDAM (7)
- SWEDISH UNIV AGR SCI (7)
- OSLO UNIV (7)
- UPPSALA HOSP UNIV (6)

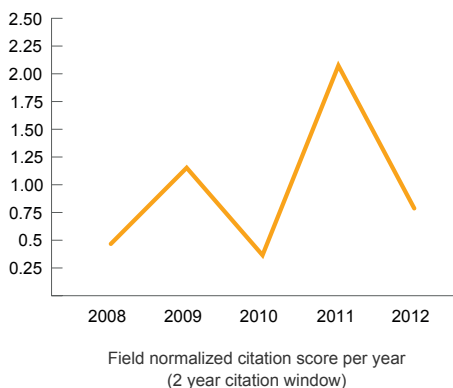
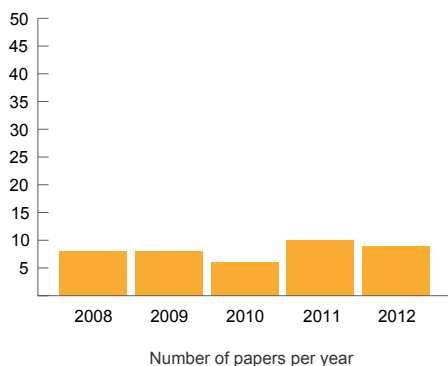
MOST FREQUENT SUBFIELDS

- ENVIRONMENTAL SCIENCES & ECOLOGY (88)
- CHEMISTRY (42)
- PUBLIC, ENVIRONMENTAL & OCCUPATIONAL HEALTH (20)
- ENGINEERING (19)
- TOXICOLOGY (18)
- BIOCHEMISTRY & MOLECULAR BIOLOGY (15)
- ENVIRONMENTAL SCIENCES (13)
- ENGINEERING, ENVIRONMENTAL (7)
- PLANT SCIENCES (6)
- FOOD SCIENCE & TECHNOLOGY (5)
- BIOPHYSICS (5)
- PHYSICS (4)

COLLABORATION NETWORK

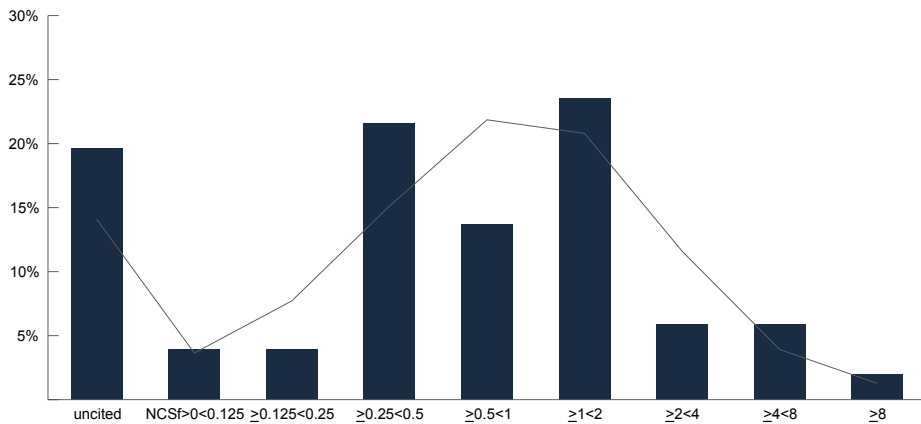


NUMBER OF PAPERS (P)	41
Number of papers (articles, letters and reviews) published by UoA "PROJ_MATH-PHYS_V1" during 2008-2012.	
NUMBER OF FRACTIONALIZED PAPERS (Frac P)	16.7
Sum of author fractionalized papers.	
CITATIONS PER PAPER (CPP)	5.4
Number of citations per paper.	
JOURNAL NORMALIZED CITATION SCORE (NCSj)	0.65
CPP normalized in relation to the UoA "PROJ_MATH-PHYS_V1" journal set (average=1.00).	
NORMALIZED JOURNAL CITATION SCORE (NJCS)	1.08
The impact of the journal set normalized in relation to its sub-fields (average=1.00).	
FIELD NORMALIZED CITATION SCORE (NCSf)	0.82
CPP normalized in relation to the UoA "PROJ_MATH-PHYS_V1" sub-field set (average=1.00).	
SUM OF FIELD NORMALIZED CITATION SCORE (Sum NCSf)	13.7
NCSf times Frac P.	
TOP 5 % (TOP5%)	4.48
Percentage of papers above the 95th citation percentile.	
VITALITY	1.09
Mean reference age normalized in relation to the sub-field set (average=1, higher=younger).	



BIBLIOMETRIC INDICATORS

PERCENTAGE NOT CITED PAPERS (PNC)	17
Percentage of not cited papers during the period.	
HIRSCH INDEX (h-index)	10
The h number papers that have at least h citations each.	
AUTHOR MEAN (A_{um})	3.2
Mean number of authors per paper.	
INTERNATIONAL COLLABORATION MEAN (IntCOLL_m)	1.4
Mean number of countries per paper.	



Citation profile: The distribution of field normalized citation score for PROJ_MATH-PHYS_V1 (bars) compared with all papers attributed to Swedish Universities (line).

PUBLICATION PROFILE



The map shows papers (nodes) published by PROJ. MATH-PHYS. V1. Relations (edges) are based on bibliographic coupling. Most frequent keywords are displayed for groups of related papers. Papers with high field normalized citation score (>3) are marked with a pink border. Edges between publications with high vitality (>1.2) are drawn in pink.

MOST FREQUENT JOURNALS

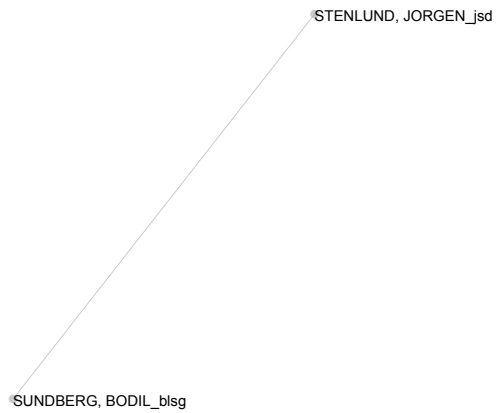
- PHYS REV A (5)
- NANO LETT (5)
- OPT EXPRESS (4)
- EDUC STUD MATH (3)
- CLASSICAL QUANT GRAV (3)
- PHYS REV B (2)
- J APPL MECH-T ASME (2)
- SCI REP-UK (1)
- SCAND J EDUC RES (1)
- PHYSICA C (1)
- PHYSICA B (1)
- PHYS REV LETT (1)

MOST FREQUENT COLLABORATORS

- CHALMERS (22)
- ÖREBRO UNIV (19)
- QUEENSLAND UNIV (7)
- MID SWEDEN UNIV (7)
- KARLSTAD UNIV (5)
- TECH UNIV DENMARK (4)
- STOCKHOLM UNIV (3)
- MALARDALEN UNIV (3)
- LINNAEUS UNIV (3)
- GOTHENBURG UNIV (3)
- OXFORD UNIV (2)
- LUND UNIV (2)

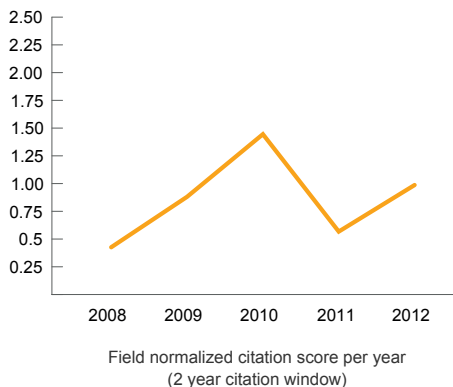
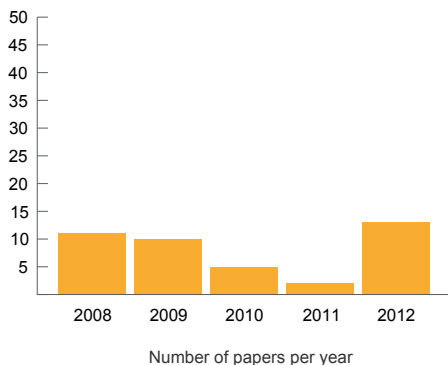
MOST FREQUENT SUBFIELDS

- PHYSICS (22)
- OPTICS (10)
- MATERIALS SCIENCE (10)
- SCIENCE & TECHNOLOGY - OTHER TOPICS (9)
- CHEMISTRY (7)
- MATHEMATICS (5)
- EDUCATION & EDUCATIONAL RESEARCH (5)
- ASTRONOMY & ASTROPHYSICS (5)
- PHYSICS, ATOMIC, MOLECULAR & CHEMICAL (4)
- MECHANICS (3)
- COMPUTER SCIENCE (2)
- PSYCHOLOGY (1)



BIBLIOMETRIC INDICATORS

NUMBER OF PAPERS (P)	41
Number of papers (articles, letters and reviews) published by UoA "PROJ_COMPUTER_V1" during 2008-2012.	
NUMBER OF FRACTIONALIZED PAPERS (Frac P)	18.5
Sum of author fractionalized papers.	
CITATIONS PER PAPER (CPP)	3.8
Number of citations per paper.	
JOURNAL NORMALIZED CITATION SCORE (NCSj)	1.10
CPP normalized in relation to the UoA "PROJ_COMPUTER_V1" journal set (average=1.00).	
NORMALIZED JOURNAL CITATION SCORE (NJCS)	0.93
The impact of the journal set normalized in relation to its sub-fields (average=1.00).	
FIELD NORMALIZED CITATION SCORE (NCSf)	0.91
CPP normalized in relation to the UoA "PROJ_COMPUTER_V1" sub-field set (average=1.00).	
SUM OF FIELD NORMALIZED CITATION SCORE (Sum NCSf)	16.8
NCSf times Frac P.	
TOP 5 % (TOP5%)	0.0
Percentage of papers above the 95th citation percentile.	
VITALITY	1.09
Mean reference age normalized in relation to the sub-field set (average=1, higher=younger).	



BIBLIOMETRIC INDICATORS

PERCENTAGE NOT CITED PAPERS (PNC) **20**

Percentage of not cited papers during the period.

HIRSCH INDEX (h-index) **7**

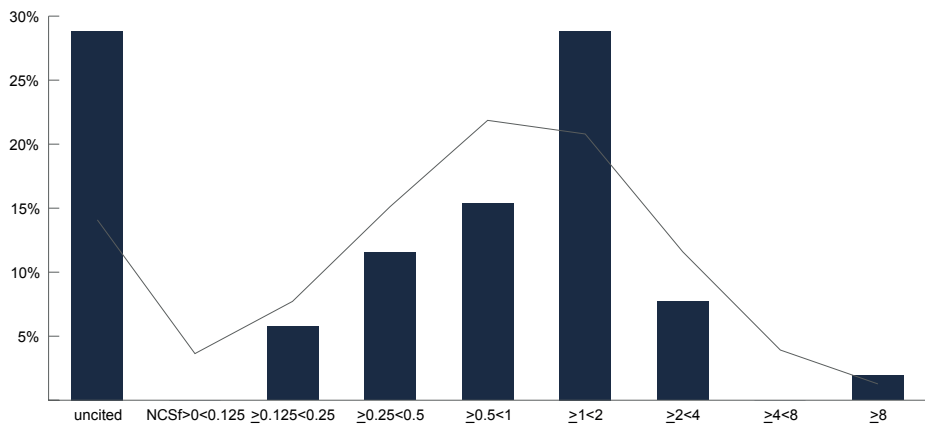
The h number papers that have at least h citations each.

AUTHOR MEAN (A_{Um}) **3.3**

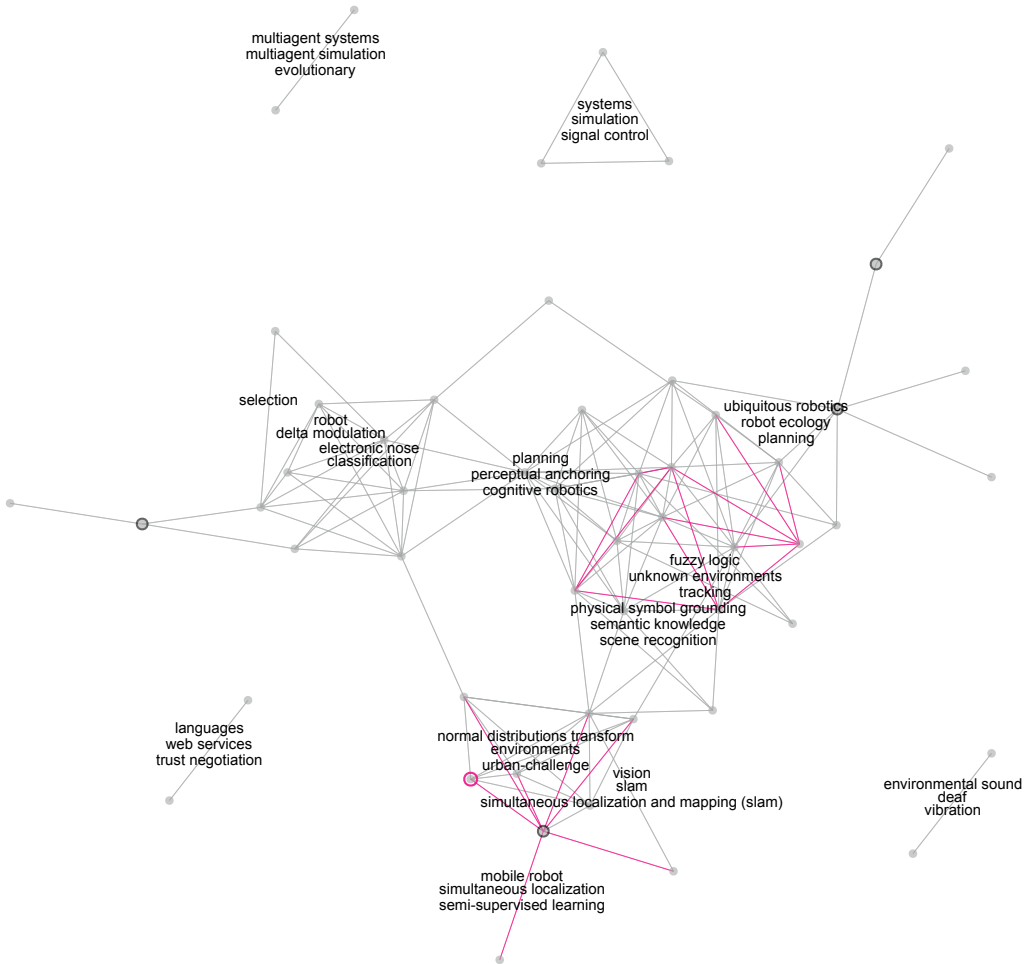
Mean number of authors per paper.

INTERNATIONAL COLLABORATION MEAN (IntCOLL_m) **1.5**

Mean number of countries per paper.



Citation profile: The distribution of field normalized citation score for PROJ_COMPUTER_V1 (bars) compared with all papers attributed to Swedish Universities (line).



The map shows papers (nodes) published by PROJ_COMPUTER_V1.
 Relations (edges) are based on bibliographic coupling.
 Most frequent keywords are displayed for groups of related papers.
 Papers with high field normalized citation score (>3) are marked with a pink border.
 Edges between publications with high vitality (>1.2) are drawn in pink.

MOST FREQUENT JOURNALS

- ROBOT AUTON SYST (10)
- SENSORS-BASEL (6)
- SENSOR ACTUAT B-CHEM (2)
- PERVASIVE MOB COMPUT (2)
- J FIELD ROBOT (2)
- J AMB INTEL SMART EN (2)
- INT J ROBOT RES (2)
- INT J ARTIF INTELL T (2)
- ELECTRON LETT (2)
- ROBOTICA (1)
- PATTERN RECOGN LETT (1)
- MACH VISION APPL (1)

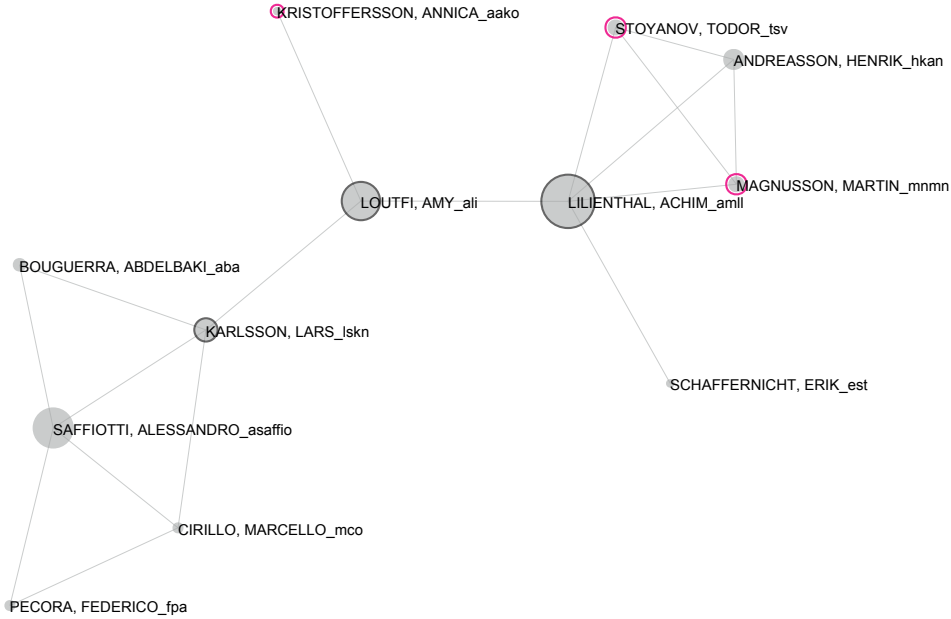
MOST FREQUENT COLLABORATORS

- OREBRO UNIV (54)
- MALAGA UNIV (4)
- LINCOLN UNIV (3)
- TECH UNIV DENMARK (2)
- SASTRA UNIV (2)
- OREBRO UNIV HOSP (2)
- BAM FED INST MAT RES & TESTING (2)
- XLAB DOO (1)
- WURZBURG UNIV (1)
- ULM UNIV (1)
- TRENT UNIV (1)
- TORONTO UNIV (1)

MOST FREQUENT SUBFIELDS

- COMPUTER SCIENCE (33)
- ROBOTICS (22)
- AUTOMATION & CONTROL SYSTEMS (13)
- ENGINEERING (9)
- INSTRUMENTS & INSTRUMENTATION (8)
- ELECTROCHEMISTRY (8)
- CHEMISTRY (8)
- TELECOMMUNICATIONS (6)
- REHABILITATION (1)
- OTORHINOLARYNGOLOGY (1)
- OPERATIONS RESEARCH & MANAGEMENT SCIENCE (1)
- ENGINEERING, MANUFACTURING (1)

Faculty of Business, Science and Engineering; Engineering
Subunit: Computer Science
COLLABORATION NETWORK



Faculty of Humanities
and Social Sciences

Faculty of Humanities and Social Sciences
Unit of Evaluation: Humanities

Humanities

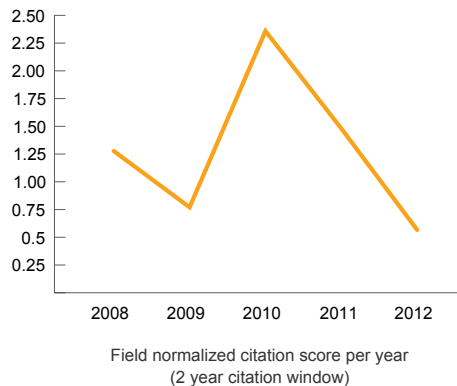
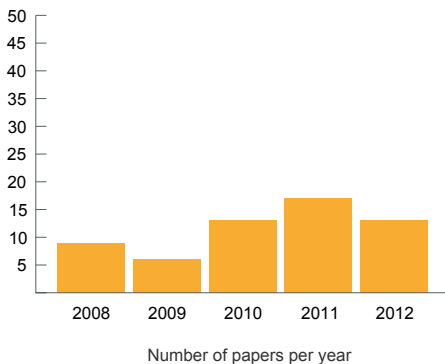
		WEB OF SCIENCE																			DIVA 2008 - 2014													
AUID	ER	GEND	STA	UNI	#P20	#P20	#FRAC	NCS				VITA				TOP	TOP	TOP	TOP	PNC	AUm	LLm	IntCO	PM	TOP	Level1	DIVA	DIVA	DIVA	DIVA	DIVA	DIVA	DIVA	
					08-14	08-12	(08-12)	FAP	j	S	f	LITY	1	5	10	25	50										Level2	%Level1	%Level2	PP	REF	PP/REF		
wtm	M	Prof	CUL		6	3	0,4	0,3	1,88	1,29	2,12	0,87	0%	0%	59%	70%	100%	0%	7,1	2,6	3,3	3,3	TOP50%	12	0	100%	0%	4,9	7,1	0,7				
aom	F	Prof	CUL		6	6	1,5	1,4	1,04	0,86	0,76	0,99	0%	0%	0%	69%	0%	4,1	1,1	3,0	3,0	TOP50%	9	1	84%	16%	3,2	7,1	0,4					
aye	F	Prof	CUL		31	20	3,6	2,4	0,63	1,17	0,77	1,11	0%	0%	2%	29%	46%	19%	5,6	3,3	5,7	5,7	TOP25%	25	57	5%	95%	75,6	7,1	10,6				
mbg	F	Seni	CUL				0,0																1	0	100%	0%	0,3	7,1	0,0					
ashm	M	Seni	CUL				0,0																											
iejh	F	Seni	CUL				0,0																	2	0	100%	0%	0,7	7,1	0,1				
tsnn	M	Seni	CUL				0,0																	1	0	100%	0%	0,3	7,1	0,0				
rtm	M	Seni	CUL				0,0																	2	1	51%	49%	2,0	7,1	0,3				
swm	M	Seni	CUL		1	0	0,0	0,0	0,00	0,00	0,00	0,00	0%	0%	0%	0%	0%	0%	0,0	0,0	0,0	0,0	<top50%	1	0	100%	0%	0,2	7,1	0,0				
cet	F	Rese	HIS				0,0																											
bhy	M	Prof	HIS				0,0																	4	0	100%	0%	8,9	7,1	1,2				
cog	F	Prof	HIS				0,0																	9	1	97%	3%	9,7	7,1	1,4				
hbs	M	Seni	HIS				0,0																											
lbd	F	Seni	HIS				0,0																	4	0	100%	0%	3,4	7,1	0,5				
jmen	M	Seni	HIS				0,0																	1	0	100%	0%	1,0	7,1	0,1				
smde	M	Rese	HUM		2	0	0,0	0,0																2	3	18%	82%	11,0	7,1	1,5				
cbj	M	Prof	HUM				0,0																											
egg	F	Prof	HUM		3	3	1,5	1,9	1,28	1,05	3,69	1,32	1%	17%	17%	33%	50%	33%	2,0	1,0	9,6	9,6	TOP10%	6	5	37%	63%	8,3	7,1	1,2				
acdn	F	Seni	HUM				0,0																	0	1	0%	100%	3,0	7,1	0,4				
asfn	M	Seni	HUM				0,0																											
mawl	F	Seni	HUM		2	2	1,0	0,7	1,92	1,09	5,54	1,38	2%	25%	25%	50%	75%	0%	2,0	1,0	4,7	4,7	TOP25%	5	2	56%	44%	4,5	7,1	0,6				
uvn	M	Seni	HUM		1	1	1,0	0,7	0,00	0,70	0,00	1,01	0%	0%	0%	0%	0%	100%	1,0	1,0	0,9	0,9	<top50%	5	2	76%	24%	16,7	7,1	2,3				
cre	M	Othe	HUM				0,0																	3		100%	0%	1,9	7,1	0,3				
ovy	M	Othe	HUM				0,0																	7	2	56%	44%	9,1	7,1	1,3				
gran	M	Prof	LAN				0,0																	6	1	34%	66%	12,1	7,1	1,7				
peh	M	Prof	LAN				0,0																	4	0	100%	0%	3,5	7,1	0,5				
pgan	M	Seni	LAN				0,0																	1	0	100%	0%	1,0	7,1	0,1				
iytr	F	Seni	LAN				0,0																	3	0	100%	0%	0,4	7,1	0,1				
ugh	F	Seni	LAN				0,0																											
chh	F	Seni	LAN				0,0																											
msjb	M	Seni	LAN				0,0																											
clm	F	Seni	LAN				0,0																											
gnn	F	Seni	LAN				0,0																		1	0	100%	0%	0,7	7,1	0,1			
ezn	F	Seni	LAN				0,0																											
hra	M	Seni	LAN				0,0																											
tssn	M	Seni	LAN				0,0																											
aaun	F	Seni	LAN				0,0																											
swd	M	Seni	LAN				0,0																											
gnen	M	Prof	MED		10	5	4,5	5,7	0,56	0,99	0,50	0,99	0%	0%	0%	0%	46%	0%	1,1	1,0	9,6	9,6	TOP10%	4	9	16%	84%	18,8	7,1	2,6				
mki	M	Prof	MED		5	4	2,0	2,5	2,61	0,72	2,29	1,15	1%	9%	39%	50%	100%	0%	2,0	1,3	17,2	17,2	TOP10%	7	12	34%	66%	14,1	7,1	2,0				
aak	F	Prof	MED		9	8	5,5	6,7	0,57	0,70	0,44	1,03	0%	0%	0%	0%	49%	36%	1,5	1,0	12,2	12,2	TOP10%	2	11	9%	91%	22,5	7,1	3,2				
dnn	M	Prof	MED		11	4	2,0	2,5	1,52	0,54	0,89	0,99	0%	0%	25%	25%	50%	25%	2,0	1,3	11,2	11,2	TOP10%	8	5	32%	68%	15,5	7,1	2,2				
hnan	F	Seni	MED				0,0																											
plbz	M	Seni	MED		3	2	2,0	2,5	2,96	0,89	2,60	1,17	0%	0%	50%	100%	100%	0%	1,0	1,0	22,3	22,3	TOP3%	7	4	31%	69%	11,6	7,1	1,6				
lcr	F	Seni	MED				0,0																		2	2	26%	74%	5,4	7,1	0,8			
amy	M	Seni	MED				0,0																		7	4	65%	35%	8,5	7,1	1,2			
msen	M	Seni	MED		1	1	1,0	1,3	0,00	0,22	0,00	1,28	0%	0%	0%	0%	0%	100%	1,0	1,0	1,6	1,6	TOP50%	5	0	100%	0%	4,2	7,1	0,6				
ajd	F	Seni	MED				0,0																		4	2	61%	39%	5,1	7,1	0,7			
cmr	F	Seni	MED		1	1	1,0	0,7	3,00	1,58	4,74	1,82	0%	0%	0%	0%	100%	0%	1,0	1,0	1,7	1,7	TOP50%	2	0	100%	0%	1,7	7,1	0,2				
jnn	M	Seni	MED				0,0																		3	1	15%	85%	9,4	7,1	1,3			
jnn	M	Seni	MED		3	2	1,5	1,5	0,00	1,54	0,00	1,00	0%	0%	0%	0%	0%	100%	1,3	1,0	1,9	1,9	TOP50%	2	2	33%	67%	3,7	7,1	0,5				
arl	F	Seni	MED		1	0	0,0	0,0	0,00	0,00	0,00	0,00	0%	0%	0%	0%	0%	0%	0,0	0,0	0,0	0,0	<top50%	12	3	67%	33%	15,2	7,1	2,1				
bnl	F	Prof	RHE				0,0																		15	1	97%	3%	18,1	7,1	2,5			
megg	F	Seni	RHE				0,0																		3		100%	0%	2,1	7,1	0,3			
srn	M	Seni	RHE				0,0																		2		100%	0%	1,7	7,1	0,2			

PRODUCTION
31,0
PERSONNEL
55
PRODUCTIVITY
0,56

ABBR:
AUID See Annex F
UNIT CUL=Culinary Arts and Meal Science; HI=History; HUM=Musiology; LAN=Language Studies; MED=Media and Communication Studies; RHE=Rhetoric
STATUS Prof=Professor; Seni=Senior Lecturer; Rese=Researcher; Post=Postdoc; Othe=Other

BIBLIOMETRIC INDICATORS

NUMBER OF PAPERS (P)	58
Number of papers (articles, letters and reviews) published by UoA "proj_UOA_humanities_v2" during 2008-2012.	
NUMBER OF FRACTIONALIZED PAPERS (Frac P)	28.5
Sum of author fractionalized papers.	
CITATIONS PER PAPER (CPP)	3.7
Number of citations per paper.	
JOURNAL NORMALIZED CITATION SCORE (NCSj)	1.10
CPP normalized in relation to the UoA "proj_UOA_humanities_v2" journal set (average=1.00).	
NORMALIZED JOURNAL CITATION SCORE (NJCS)	0.92
The impact of the journal set normalized in relation to its sub-fields (average=1.00).	
FIELD NORMALIZED CITATION SCORE (NCSf)	1.29
CPP normalized in relation to the UoA "proj_UOA_humanities_v2" sub-field set (average=1.00).	
SUM OF FIELD NORMALIZED CITATION SCORE (Sum NCSf)	36.8
NCSf times Frac P.	
TOP 5 % (TOP5%)	2.41
Percentage of papers above the 95th citation percentile.	
VITALITY	1.11
Mean reference age normalized in relation to the sub-field set (average=1, higher=younger).	



BIBLIOMETRIC INDICATORS

PERCENTAGE NOT CITED PAPERS (PNC) 19

Percentage of not cited papers during the period.

HIRSCH INDEX (h-index) 11

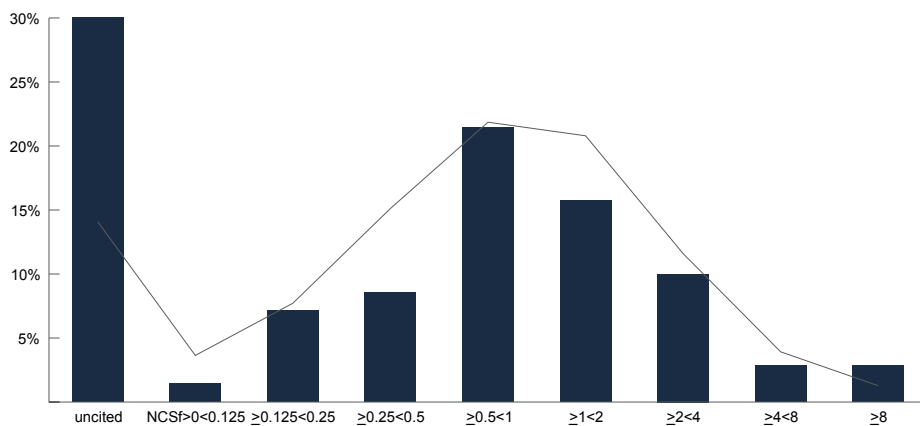
The h number papers that have at least h citations each.

AUTHOR MEAN (AUm) 4.2

Mean number of authors per paper.

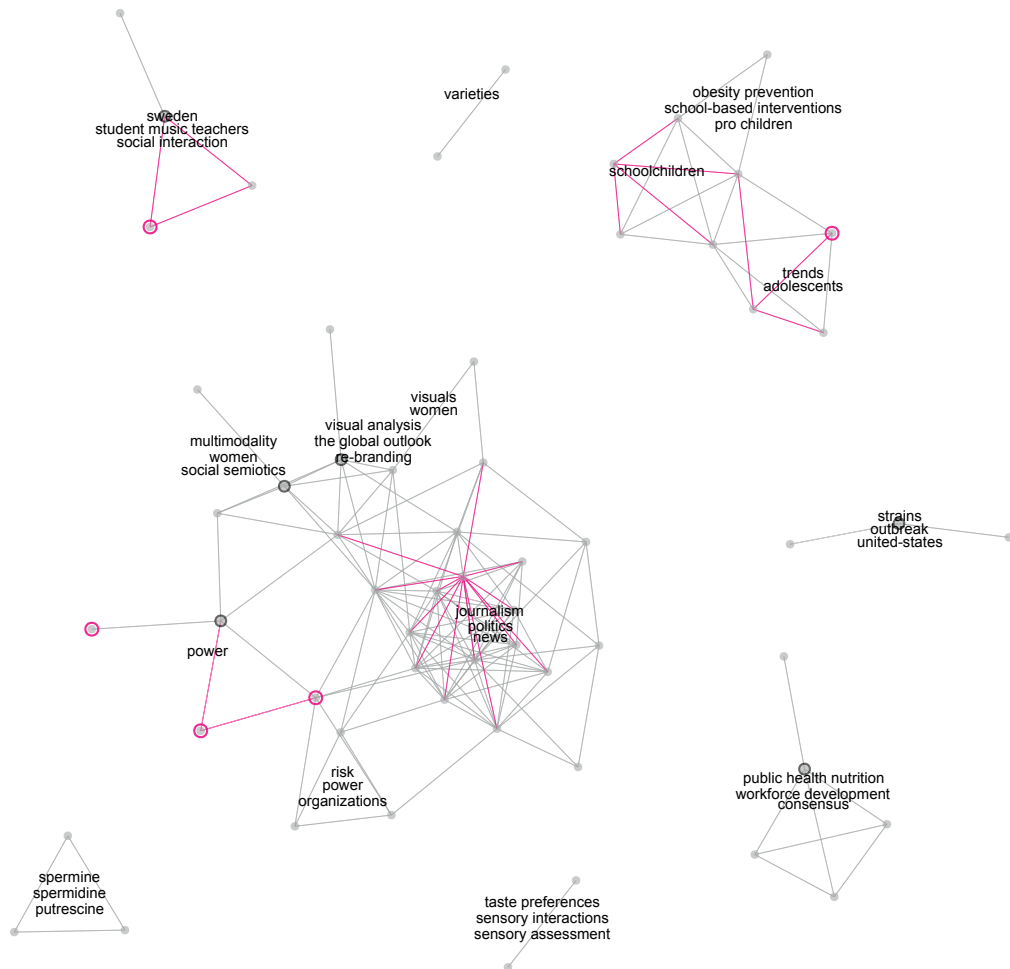
INTERNATIONAL COLLABORATION MEAN (IntCOLLm) 2.2

Mean number of countries per paper.



Citation profile: The distribution of field normalized citation score for proj_UOA_humanities_v2 (bars) compared with all papers attributed to Swedish Universities (line).

PUBLICATION PROFILE



The map shows papers (nodes) published by proj_UOA_humanities_v2. Relations (edges) are based on bibliographic coupling. Most frequent keywords are displayed for groups of related papers. Papers with high field normalized citation score (>3) are marked with a pink border. Edges between publications with high vitality (>1.2) are drawn in pink.

MOST FREQUENT JOURNALS

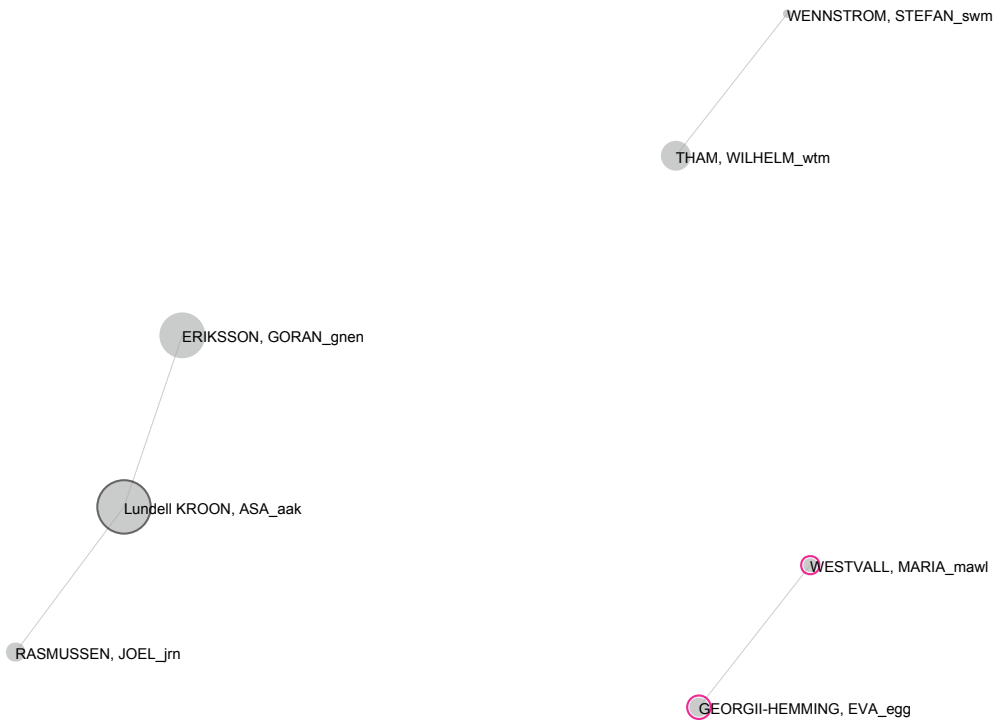
- JOURNALISM STUD (6)
- MEDIA CULT SOC (5)
- PUBLIC HEALTH NUTR (4)
- OBES REV (3)
- J LANG POLIT (3)
- TEXT TALK (2)
- NUTR REV (2)
- FOODBORNE PATHOG DIS (2)
- FOOD NUTR RES (2)
- BRIT J MUSIC EDUC (2)
- VISUAL COMMUN-US (1)
- SEMIOTICA (1)

MOST FREQUENT COLLABORATORS

- OREBRO UNIV (39)
- KAROLINSKA INST (30)
- GOTHENBURG UNIV (10)
- GHENT UNIV (7)
- VRIJE UNIV AMSTERDAM MED CTR (6)
- OREBRO UNIV HOSP (6)
- AKERSHUS UNIV COLL (6)
- CARDIFF UNIV (5)
- TARTU UNIV (4)
- OSLO & AKERSHUS UNIV (4)
- LANCASTER UNIV (4)
- DEPT HLTH NUTR & MANAGEMENT (4)

MOST FREQUENT SUBFIELDS

- COMMUNICATION (21)
- NUTRITION & DIETETICS (12)
- SOCIOLOGY (8)
- LINGUISTICS (8)
- PUBLIC ENVIRONMENTAL & OCCUPATIONAL HEALTH (7)
- FOOD SCIENCE & TECHNOLOGY (7)
- MUSIC (5)
- ENDOCRINOLOGY & METABOLISM (4)
- EDUCATION & EDUCATIONAL RESEARCH (4)
- PEDIATRICS (3)
- BUSINESS & ECONOMICS (3)
- PSYCHOLOGY (2)



Faculty of Humanities and Social Sciences
 Unit of Evaluation: Education and Social Sciences

Education and Social Sciences

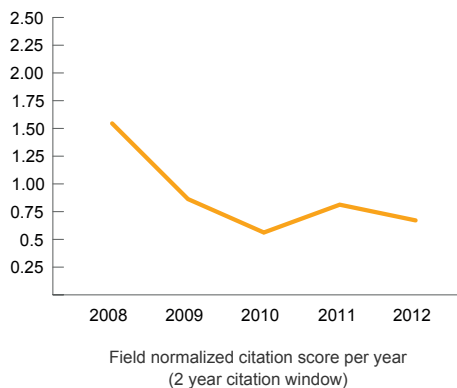
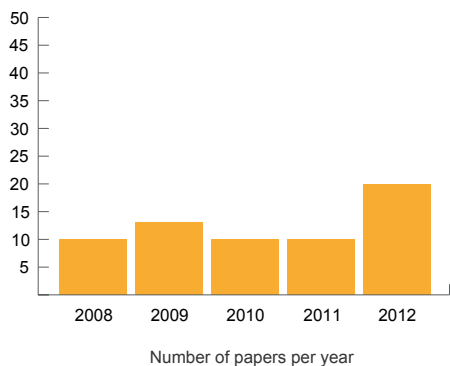
WEB OF SCIENCE																		DIVA 2008 - 2014													
AUID	GEN DER	STAT US	UNIT	#P20 08-14	#P20 8-12	#FRAC (08-12)	FAP	NCS	NJS	NCS f	VITALI TY	TOP1	TOP2	TOP5	TOP 0	TOP 5	TOP 0	PNC	AUm	IntCO LLm	PM S	TOP LEVEL	DIVA Level1	DIVA Level2	DIVA %Level 1	DIVA %Level 2	DIVA PP	DIVA REF	DIVA PPIR EF		
																														sba	F
osn	M	Seni	CUL	1	1	1.0	1.3	0.00	0.16	0.00	0.87	0%	0%	0%	0%	0%	100%	1.0	1.0	1.6	TOP50%	2	1	50%	50%	3.0	7.1	0.4			
aqt	F	Asso	EDU	4	3	1.8	2.3	0.14	0.55	0.10	0.84	0%	0%	0%	0%	0%	73%	1.6	1.0	2.8	TOP50%	15	3	73%	27%	15.0	7.1	2.1			
clin	M	Prof	EDU	1	1	1.0	1.3	0.00	0.88	0.00	0.80	0%	0%	0%	0%	0%	100%	1.0	1.0	1.6	TOP50%	9	1	67%	33%	9.1	7.1	1.3			
cll	M	Prof	EDU	1	1	0.5	0.6	0.65	1.13	0.74	0.96	0%	0%	0%	0%	0%	100%	0%	2.0	2.0	1.4	TOP50%	4	0	100%	0%	2.5	7.1	0.4		
jon	M	Prof	EDU	10	4	1.8	1.9	1.14	0.69	1.23	1.03	0%	0%	21%	29%	59%	27%	2.2	1.0	6.0	TOP25%	21	6	62%	38%	18.1	7.1	2.5			
kad	F	Seni	EDU				0.0																								
dnao	M	Seni	EDU				0.0																								
eak	F	Seni	EDU	1	0	0.0	0.0	0.00	0.00	0.00	0.00	0%	0%	0%	0%	0%	0%	0%	0.0	0.0	0.0	stop50%	2	1	33%	67%	4.5	7.1	0.6		
abh	M	Seni	EDU	1	0	0.0	0.0	0.00	0.00	0.00	0.00	0%	0%	0%	0%	0%	0%	0%	0.0	0.0	0.0	stop50%	3	1	59%	41%	3.7	7.1	0.5		
len	M	Seni	EDU				0.0																								
pfg	F	Seni	EDU				0.0																								
sfn	F	Seni	EDU				0.0																								
afin	F	Seni	EDU				0.0																0	0	0%	0%	0.0	7.1	0.0		
menk	F	Seni	EDU				0.0																								
mos	F	Seni	EDU				0.0																1	0	100%	0%	0.5	7.1	0.1		
sps	M	Seni	EDU				0.0																								
mmsg	F	Seni	EDU				0.0																								
lhsh	F	Seni	EDU				0.0																								
bttn	F	Seni	EDU				0.0																1	0	100%	0%	0.5	7.1	0.1		
nmwd	F	Seni	EDU	1	0	0.0	0.0	0.00	0.00	0.00	0.00	0%	0%	0%	0%	0%	0%	0.0	0.0	0.0	stop50%	5	0	100%	0%	2.9	7.1	0.4			
sasd	F	Seni	GEN	2	1	0.3	0.4	1.55	1.31	2.07	1.20	0%	0%	0%	0%	83%	100%	0%	3.0	2.0	1.6	TOP50%	1	4	11%	89%	3.1	7.1	0.4		
nika	F	Rese	GEN	1	1	1.0	1.1	0.00	0.00	0.00	1.01	0%	0%	0%	0%	0%	100%	1.0	1.0	1.4	TOP50%										
(suan)	F	Rese	GEN				0.0																								
kilm	F	Rese	GEN				0.0																								
jhn	M	Prof	GEN	16	12	6.5	7.3	0.80	0.73	0.65	0.99	0%	0%	2%	22%	41%	23%	1.9	2.1	16.8	TOP10%	30	39	32%	68%	54.2	7.1	7.6			
dqbr	M	Post	GEN	2	2	0.5	0.5	0.87	1.26	1.24	1.07	0%	0%	27%	27%	27%	0%	4.4	1.7	2.3	TOP50%	2	2	70%	30%	2.9	7.1	0.4			
lagn	F	Post	GEN	2	1	1.0	1.3	2.96	0.71	2.09	1.08	0%	0%	0%	100%	100%	0%	1.0	1.0	6.4	TOP50%	2	4	10%	90%	16.7	7.1	2.3			
lhu	F	Prof	GEN	1	1	0.5	0.6	1.92	0.06	0.28	0.95	0%	0%	0%	0%	22%	0%	2.0	1.0	0.7	stop50%	5	1	81%	19%	2.0	7.1	0.3			
ajr	F	Prof	GEN				0.0																0	7	0%	100%	4.8	7.1	0.7		
bag	F	Seni	GEN				0.0																0	1	0%	100%	1.0	7.1	0.1		
gikn	F	Seni	GEN				0.0																4	0	100%	0%	2.6	7.1	0.4		
dbt	M	Rese	GEO	1	0	0.0	0.0	0.00	0.00	0.00	0.00	0%	0%	0%	0%	0%	0%	0.0	0.0	0.0	stop50%										
nrk	M	Prof	GEO	3	3	1.0	1.1	2.34	0.67	1.81	0.95	0%	17%	17%	41%	67%	0%	3.0	1.0	5.3	TOP25%	4	2	45%	55%	2.7	7.1	0.4			
aat	F	Seni	GEO				0.0																								
eagn	F	Seni	GEO	2	1	0.3	0.5	4.89	0.65	3.92	1.01	0%	50%	50%	100%	100%	0%	3.0	1.0	4.8	TOP25%	4	0	100%	0%	1.6	7.1	0.2			
krpn	M	Seni	GEO				0.0																								
ehg	M	Rese	POL	8	5	4.0	4.5	0.95	1.13	1.51	1.07	0%	13%	25%	44%	56%	13%	1.3	1.0	20.6	TOP5%	7	3	43%	57%	13.2	7.1	1.8			
nrko	M	Post	POL	4	2	1.3	1.4	0.07	0.91	0.16	1.00	0%	0%	0%	0%	19%	80%	1.6	1.4	2.1	TOP50%	12	3	68%	32%	11.9	7.1	1.7			
aian	F	Post	POL				0.0																2	0	100%	0%	1.2	7.1	0.2		
jam	M	Prof	POL	4	3	1.1	1.2	0.20	1.47	0.44	0.98	0%	0%	0%	0%	52%	46%	2.8	1.9	2.3	TOP50%	13	5	46%	54%	9.7	7.1	1.4			
jnon	M	Prof	POL	2	2	1.0	1.0	0.39	0.77	0.56	1.06	0%	0%	0%	0%	25%	25%	50%	2.0	1.0	2.0	TOP50%	5	4	27%	73%	10.3	7.1	1.4		
caen	F	Seni	POL				0.0																5		100%	0%	2.9	7.1	0.4		
abm	F	Seni	POL				0.0																								
bhnr	M	Seni	POL				0.0																4		100%	0%	2.4	7.1	0.3		
guhhd	F	Seni	POL	1	1	0.5	0.6	0.00	0.73	0.00	1.32	0%	0%	0%	0%	0%	100%	2.0	1.0	0.7	stop50%	9	2	52%	48%	8.4	7.1	1.2			
jrje	M	Seni	POL				0.0																								
jms	M	Rese	SOC	6	4	1.5	1.7	4.21	1.07	2.93	0.81	0%	23%	53%	78%	78%	22%	2.7	1.3	16.5	TOP10%										
jag	F	Rese	SOC	1	0	0.0	0.0	0.00	0.00	0.00	0.00	0%	0%	0%	0%	0%	0%	0.0	0.0	0.0	stop50%	0	0	0%	0%	0.0	7.1	0.0			
eik	M	Post	SOC	1	0	0.0	0.0	0.00	0.00	0.00	0.00	0%	0%	0%	0%	0%	0%	0.0	0.0	0.0	stop50%	3	1	76%	24%	2.1	7.1	0.3			
dlsn	M	Post	SOC				0.0																1	0	100%	0%	0.5	7.1	0.1		
nrbum	M	Prof	SOC	7	3	1.7	1.4	0.98	0.94	0.96	1.05	0%	0%	0%	15%	83%	0%	1.8	1.0	3.3	TOP50%	14	10	37%	63%	19.5	7.1	2.7			
rig	M	Prof	SOC	14	8	4.8	4.3	1.85	0.88	1.51	1.08	0%	21%	31%	36%	62%	0%	1.7	1.0	31.5	TOP5%	27	7	81%	19%	26.9	7.1	3.8			
cern	F	Prof	SOC	2	2	0.8	1.0	2.04	0.83	1.84	0.92	0%	1%	15%	55%	60%	0%	2.4	1.4	2.7	TOP50%	11	2	86%	14%	11.0	7.1	1.5			
yua	F	Prof	SOC	5	3	2.3	2.1	0.64	0.80	0.42	1.07	0%	0%	0%	0%	7%	0%	1.3	1.0	2.6	TOP50%	18	1	92%	8%	13.3	7.1	1.9			
kbe	F	Seni	SOC	4	3	3.0	3.0	0.92	1.37	1.33	0.96	0%	0%	0%	0%	67%	67%	0%	1.0	1.0	10.6	TOP10%	4	0	100%	0%	1.6	7.1	0.2		
acc	F	Seni	SOC	1	1	1.0	1.1	0.28	0.67	0.19	0.90	0%	0%	0%	0%	0%	0%	1.0	1.0	1.4	TOP50%										
jujn	M	Seni	SOC				0.0																3	0	100%	0%	2.1	7.1	0.3		
jjl	M	Seni	SOC	1	1	1.0	1.1	0.00	0.96	0.00	0.90	0%	0%	0%	0%	0%	100%	1.0	1.0	1.4	TOP50%	4	0	100%	0%	7.1	7.1	1.0			
kle	F	Seni	SOC				0.0																								
mlid	M	Seni	SOC				0.0																								
aod	F	Seni	SOC				0.0																								
mpg	M	Seni	SOC				0.0																								

PRODUCTION 45,9
 PERSONNEL 63
 PRODUCTIVITY 0,73

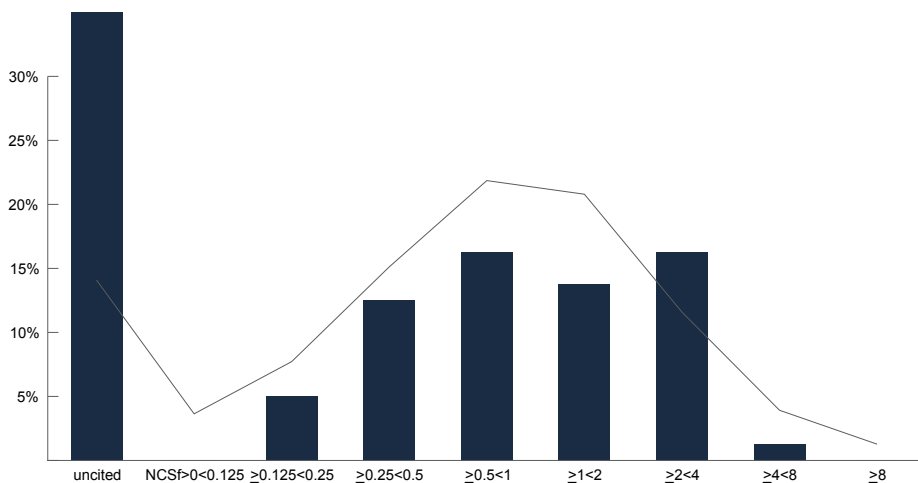
ABBR:
 AUID See Annex F
 UNIT CUL=Communication, Culture and Diversity; EDU=Education; GEN=Gender Studies; GEO=Human Geography; POL=Political Science; SOC=Sociology
 STATUS Prof=Professor; Seni=Senior Lecturer, Asso=Associate Prof, Rese=Researcher, Post=Postdoc

BIBLIOMETRIC INDICATORS

NUMBER OF PAPERS (P)	63
Number of papers (articles, letters and reviews) published by UoA "proj_UOA_edu&soc_V2" during 2008-2012.	
NUMBER OF FRACTIONALIZED PAPERS (Frac P)	41.0
Sum of author fractionalized papers.	
CITATIONS PER PAPER (CPP)	3.7
Number of citations per paper.	
JOURNAL NORMALIZED CITATION SCORE (NCSj)	1.04
CPP normalized in relation to the UoA "proj_UOA_edu&soc_V2" journal set (average=1.00).	
NORMALIZED JOURNAL CITATION SCORE (NJCS)	0.86
The impact of the journal set normalized in relation to its sub-fields (average=1.00).	
FIELD NORMALIZED CITATION SCORE (NCSf)	0.97
CPP normalized in relation to the UoA "proj_UOA_edu&soc_V2" sub-field set (average=1.00).	
SUM OF FIELD NORMALIZED CITATION SCORE (Sum NCSf)	39.6
NCSf times Frac P.	
TOP 5 % (TOP5%)	4.94
Percentage of papers above the 95th citation percentile.	
VITALITY	1.00
Mean reference age normalized in relation to the sub-field set (average=1, higher=younger).	

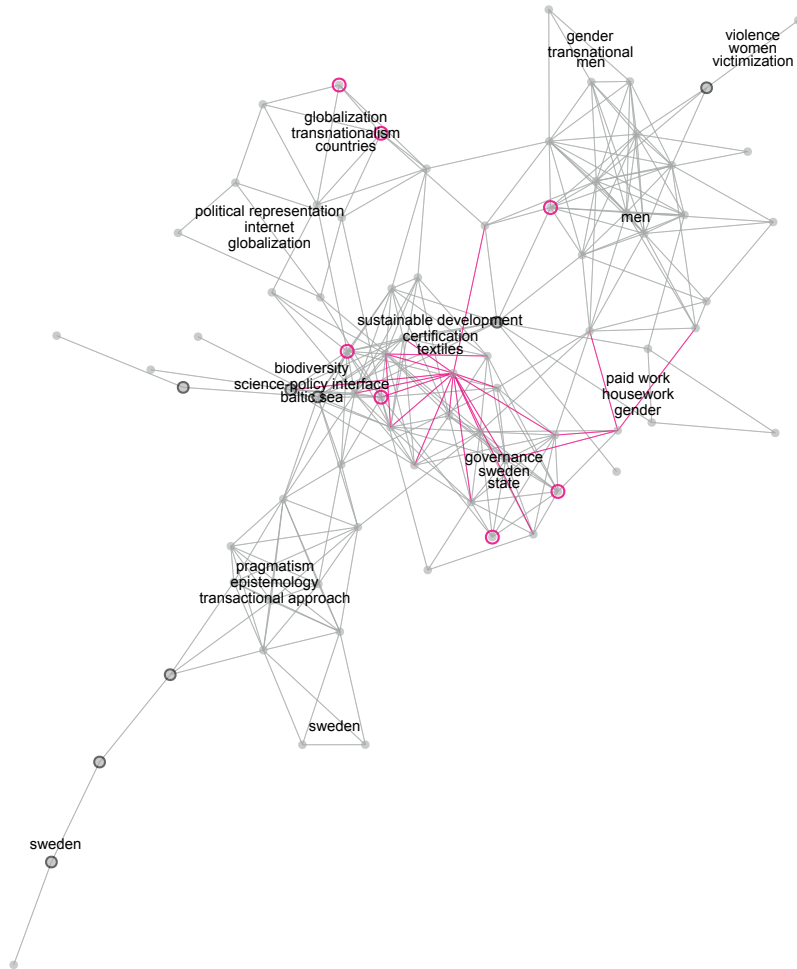


PERCENTAGE NOT CITED PAPERS (PNC)	22
Percentage of not cited papers during the period.	
HIRSCH INDEX (h-index)	8
The h number papers that have at least h citations each.	
AUTHOR MEAN (AUm)	2.1
Mean number of authors per paper.	
INTERNATIONAL COLLABORATION MEAN (IntCOLLm)	1.3
Mean number of countries per paper.	



Citation profile: The distribution of field normalized citation score for proj_UOA_edu&soc_V2 (bars) compared with all papers attributed to Swedish Universities (line).

PUBLICATION PROFILE



The map shows papers (nodes) published by proj_UOA_edu&soc_V2. Relations (edges) are based on bibliographic coupling. Most frequent keywords are displayed for groups of related papers. Papers with high field normalized citation score (>3) are marked with a pink border. Edges between publications with high vitality (>1.2) are drawn in pink.

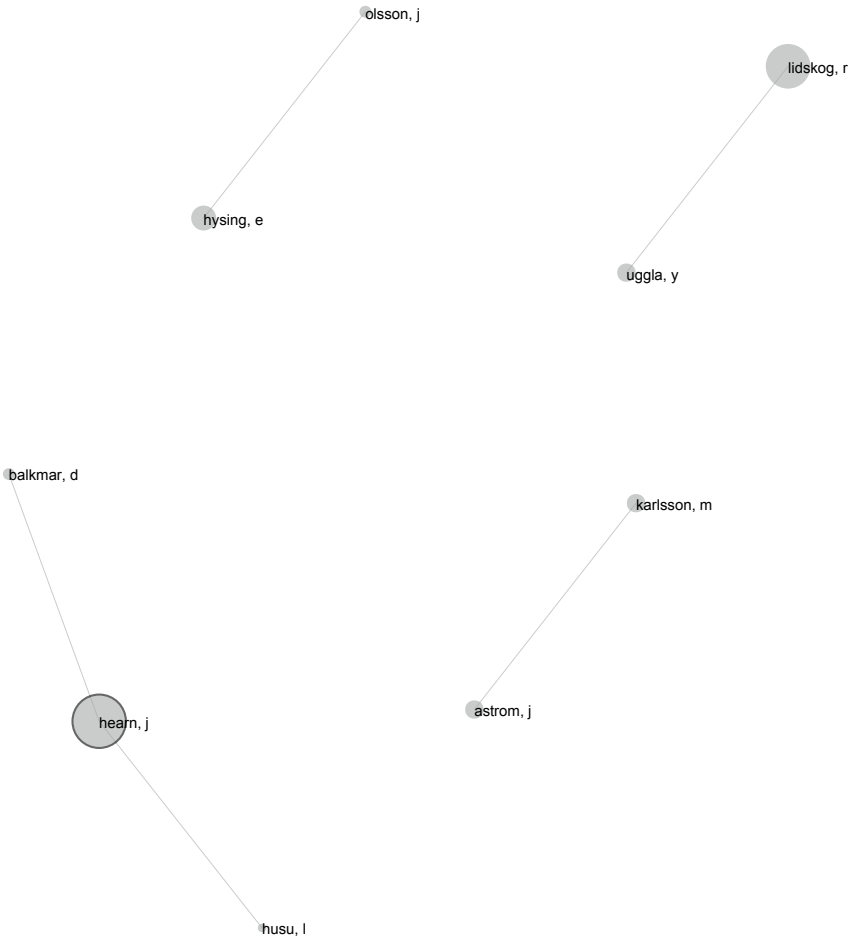
MOST FREQUENT JOURNALS

- ENVIRON EDUC RES (4)
- SOC POLIT (3)
- MEN MASC (3)
- J ENVIRON POL PLAN (3)
- NAT CULT (2)
- LOCAL GOV STUD (2)
- LANG CULT CURRIC (2)
- J RISK RES (2)
- J HUM RIGHTS (2)
- J ENVIRON PLANN MAN (2)
- GOV INFORM Q (2)
- FEM THEOR (2)

MOST FREQUENT COLLABORATORS MOST FREQUENT SUBFIELDS

- OREBRO UNIV (71)
- LINKOPING UNIV (17)
- UPPSALA UNIV (9)
- HUDDERSFIELD UNIV (5)
- BREMEN UNIV (5)
- UMEA UNIV (4)
- STOCKHOLM UNIV (4)
- SODERTORN UNIV (4)
- HANKEN SCH ECON (4)
- UFZ HELMHOLTZ CTR ENVIRONM RES (3)
- SWEDISH SCH ECON & BUSINESS ADM (3)
- SWEDISH UNIV AGR SCI (2)

- ENVIRONMENTAL SCIENCES & ECOLOGY (25)
- SOCIOLOGY (20)
- EDUCATION & EDUCATIONAL RESEARCH (15)
- GOVERNMENT & LAW (12)
- SOCIAL SCIENCES - OTHER TOPICS (11)
- PUBLIC ADMINISTRATION (9)
- WOMEN'S STUDIES (8)
- SOCIAL ISSUES (5)
- BUSINESS & ECONOMICS (5)
- INTERNATIONAL RELATIONS (3)
- GEOGRAPHY (3)
- COMMUNICATION (3)



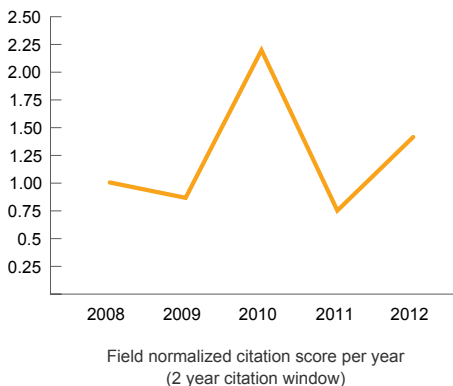
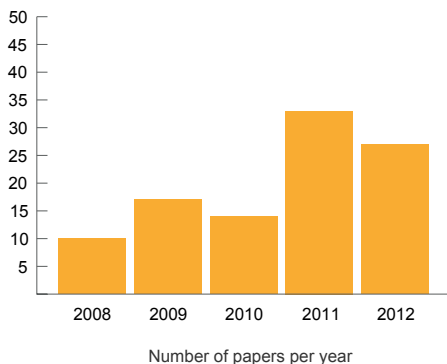
Faculty of Humanities and Social Sciences
Unit of Evaluation: Law, Psychology and Social Work

Law, Psychology and Social Work

		WEB OF SCIENCE															DIVA 2008 - 2014										
GEN STA		#P20																									
AUID	DER TUS UNIT	08-14	12	08-12	FAP	j	S	f	LITY	1	5	10	25	50	PNC	m	LlM	PM	TOP	DIVA	DIVA	DIVA	DIVA	DIVA	DIVA		
				(08-12)														POINTS	LEVEL	Level1	Level2	%Level1	%Level2	PP	REF	PP/RE	
mnsf	F ResA CHA	12	7	2.1	1.4	0.80	1.08	1.03	0.90	0%	8%	19%	31%	35%	24%	3.4	1.4	5.5	TOP25%	3	2	46%	54%	1.5	7.1	0.2	
tgz	F Post CHA	4	2	0.7	0.6	0.00	1.33	0.00	1.05	0%	0%	0%	0%	0%	100%	3.0	1.0	0.8	<TOP50%	3	1	56%	44%	2.3	7.1	0.3	
svln	M Prof CHA	49	40	11.8	8.2	1.59	1.10	1.98	1.05	9%	14%	19%	40%	66%	12%	3.4	1.7	140.4	TOP1%	60	15	63%	37%	36.3	7.1	5.1	
mts	F Prof CHA	11	7	1.5	1.0	1.02	1.00	1.16	1.02	0%	10%	21%	33%	36%	0%	4.7	1.3	4.8	TOP25%	16	6	65%	35%	6.7	7.1	0.9	
ltr	F Prof CHA	12	5	1.6	1.1	0.81	1.23	0.99	0.97	0%	11%	11%	26%	58%	0%	3.2	1.3	5.1	TOP25%	13	3	63%	37%	6.9	7.1	1.0	
plan	M Seni CHA			0.0																1	0	100%	0%	0.1	7.1	0.0	
rnbs	M Seni CHA	1	1	0.3	0.2	0.00	1.37	0.00	0.00	0%	0%	0%	0%	0%	100%	3.0	1.0	0.3	<TOP50%								
sbm	F Seni CHA	4	3	0.7	0.5	1.34	1.56	2.00	1.13	0%	0%	27%	64%	100%	0%	4.1	1.2	2.2	TOP50%	4	2	59%	41%	4.3	7.1	0.6	
kba	F Seni CHA	20	15	4.1	3.0	1.01	1.31	1.18	1.04	0%	0%	10%	34%	76%	12%	3.7	1.6	9.2	TOP25%	20	7	52%	48%	11.3	7.1	1.6	
rnko	M Seni CHA	2	2	1.3	1.3	0.14	0.27	0.13	0.94	0%	0%	0%	0%	19%	80%	1.6	1.0	1.8	TOP50%								
ifk	F Seni CHA	9	6	1.5	1.0	0.75	1.14	0.84	0.98	0%	0%	0%	25%	66%	28%	4.0	1.5	2.5	TOP50%	12	2	86%	14%	8.0	7.1	1.1	
rki	M Seni CHA	6	3	0.6	0.4	1.37	0.86	0.88	0.84	0%	0%	0%	9%	62%	0%	5.1	1.6	0.8	<TOP50%	14	2	78%	22%	5.5	7.1	0.8	
msls	M Seni CHA	1	1	0.3	0.2	0.43	1.09	0.47	0.85	0%	0%	0%	0%	31%	0%	4.0	1.0	0.2	<TOP50%								
kit	F Seni CHA	5	3	1.8	1.4	0.67	1.23	0.86	1.06	0%	0%	0%	0%	71%	0%	1.7	1.1	3.0	TOP50%	8	0	100%	0%	4.0	7.1	0.6	
mnst	M Seni CHA	17	11	2.6	1.9	1.02	1.33	1.29	1.14	0%	0%	9%	47%	71%	0%	4.2	2.1	7.3	TOP25%	11	10	29%	71%	10.5	7.1	1.5	
ncb	F Seni CHA	8	4	1.4	1.0	0.36	0.86	0.32	1.07	0%	0%	0%	0%	18%	35%	2.8	1.0	1.4	TOP50%	7	4	50%	50%	4.5	7.1	0.6	
ctd	F ResA CRI	22	11	2.4	1.9	0.92	1.42	1.17	0.93	0%	0%	2%	52%	84%	0%	4.6	1.3	5.5	TOP25%	19	17	22%	78%	30.6	7.1	4.3	
had	M Prof CRI	13	8	1.8	1.6	0.91	1.41	1.30	1.04	0%	4%	16%	43%	68%	14%	4.4	1.5	7.0	TOP25%	16	4	58%	42%	7.1	7.1	1.0	
lian	F Seni CRI	2	0	0.0	0.0	0.00	0.00	0.00	0.00	0%	0%	0%	0%	0%	0%	0.0	0.0	0.0	<TOP50%	6	0	100%	0%	2.8	7.1	0.4	
akan	F Seni CRI	7	4	1.2	0.9	0.95	1.47	1.26	0.94	0%	0%	6%	52%	52%	21%	3.3	1.1	3.0	TOP50%	11	4	57%	43%	6.2	7.1	0.9	
xxx	F Seni CRI	10	2	0.6	0.5	0.62	0.79	0.52	1.07	0%	0%	0%	0%	36%	0%	3.4	1.4	0.7	<TOP50%								
gld	M Prof LAW			0.0																8	1	63%	37%	21.5	7.1	3.0	
cnf	F Rese LAW			0.0																13	0	100%	0%	14.9	7.1	2.1	
jza	M Rese LAW			0.0																9	1	86%	14%	7.0	7.1	1.0	
cci	F Seni LAW			0.0																							
babe	F Prof LAW			0.0																							
leo	F Prof LAW			0.0																	16	11	46%	54%	20.4	7.1	2.9
eae	F Prof LAW			0.0																	29	0	100%	0%	31.5	7.1	4.4
jns	M Prof LAW			0.0																	18	4	89%	11%	35.9	7.1	5.0
knf	F Prof LAW			0.0																	9	0	100%	0%	9.6	7.1	1.3
aapo	F Prof LAW			0.0																	25	6	67%	33%	36.5	7.1	5.1
cnb	F Seni LAW			0.0																							
kkn	F Seni LAW			0.0																	2	0	100%	0%	1.5	7.1	0.2
jeh	M Seni LAW			0.0																	2	0	100%	0%	1.0	7.1	0.1
jjjn	F Seni LAW			0.0																							
meka	F Seni LAW			0.0																							
eall	F Seni LAW			0.0																	2	2	26%	74%	5.4	7.1	0.8
mls	M Seni LAW			0.0																	1	0	100%	0%	0.7	7.1	0.1
mtjn	F Seni LAW			0.0																	0	0	0%	0%	0.0	7.1	0.0
uasn	F Seni LAW			0.0																							
men	F Seni LAW			0.0																							
msg	F Seni LAW			0.0																	4	1	88%	12%	8.1	7.1	1.1
cta	F Seni LAW			0.0																							
abn	M Prof SOW	2	2	0.8	0.7	0.12	1.22	0.18	1.09	0%	0%	0%	0%	9%	60%	2.4	1.0	0.9	<TOP50%	5	2	61%	39%	4.7	7.1	0.7	
odlg	M Prof SOW	5	2	0.6	0.7	0.17	0.91	0.26	1.15	0%	0%	0%	0%	13%	43%	3.4	1.0	0.8	<TOP50%	8	2	67%	33%	3.3	7.1	0.5	
knar	F Seni SOW	1	1	0.1	0.1	2.67	1.47	3.91	1.01	0%	0%	100%	100%	100%	0%	8.0	1.0	1.8	TOP50%	3	1	87%	13%	2.9	7.1	0.4	
rbu	F Seni SOW			0.0																							
akm	F Seni SOW	4	1	0.3	0.3	0.00	0.81	0.00	1.12	0%	0%	0%	0%	100%	4.0	1.0	0.4	<TOP50%	16	1	83%	17%	8.8	7.1	1.2		
jdr	M Seni SOW	1	1	0.3	0.4	0.55	0.33	0.18	0.99	0%	0%	0%	0%	0%	0%	3.0	1.0	0.5	<TOP50%	5	1	69%	31%	3.3	7.1	0.5	
efe	M Seni SOW			0.0																	2	0	100%	0%	1.0	7.1	0.1
lahn	F Seni SOW	3	2	0.7	0.8	0.81	0.87	0.72	1.22	0%	0%	0%	0%	57%	0%	3.0	1.0	1.4	TOP50%	1	3	6%	94%	5.3	7.1	0.7	
cnan	F Seni SOW			0.0																							
brjn	M Seni SOW			0.0																	3	0	100%	0%	0.8	7.1	0.1
pnr	M Seni SOW	2	2	0.6	0.7	0.17	0.91	0.26	1.15	0%	0%	0%	0%	13%	43%	3.4	1.0	0.8	<TOP50%	4	1	78%	22%	1.5	7.1	0.2	
wsr	M Seni SOW			0.0																							
ymk	M Rese YOS	1	0	0.0	0.0	0.00	0.00	0.00	0.00	0%	0%	0%	0%	0%	0%	0.0	0.0	0.0	<TOP50%	2	1	53%	47%	1.6	7.1	0.2	
aah	M Post YOS			0.0																	3	0	100%	0%	1.8	7.1	0.3
sibr	F Post YOS	2	1	0.3	0.2	0.00	0.93	0.00	0.94	0%	0%	0%	0%	100%	3.0	1.0	0.3	<TOP50%	0	0	0%	0%	0.0	7.1	0.0		
vdll	M Post YOS	1	0	0.0	0.0	0.00	0.00	0.00	0.00	0%	0%	0%	0%	0%	0%	0.0	0.0	0.0	<TOP50%	4							

BIBLIOMETRIC INDICATORS

NUMBER OF PAPERS (P)	101
Number of papers (articles, letters and reviews) published by UoA "proj_UOA_jps_v2" during 2008-2012.	
NUMBER OF FRACTIONALIZED PAPERS (Frac P)	37.2
Sum of author fractionalized papers.	
CITATIONS PER PAPER (CPP)	6.4
Number of citations per paper.	
JOURNAL NORMALIZED CITATION SCORE (NCSj)	0.94
CPP normalized in relation to the UoA "proj_UOA_jps_v2" journal set (average=1.00).	
NORMALIZED JOURNAL CITATION SCORE (NJCS)	1.17
The impact of the journal set normalized in relation to its sub-fields (average=1.00).	
FIELD NORMALIZED CITATION SCORE (NCSf)	1.21
CPP normalized in relation to the UoA "proj_UOA_jps_v2" sub-field set (average=1.00).	
SUM OF FIELD NORMALIZED CITATION SCORE (Sum NCSf)	45.0
NCSf times Frac P.	
TOP 5 % (TOP5%)	7.20
Percentage of papers above the 95th citation percentile.	
VITALITY	1.03
Mean reference age normalized in relation to the sub-field set (average=1, higher=younger).	



BIBLIOMETRIC INDICATORS

PERCENTAGE NOT CITED PAPERS (PNC) **11**

Percentage of not cited papers during the period.

HIRSCH INDEX (h-index) **17**

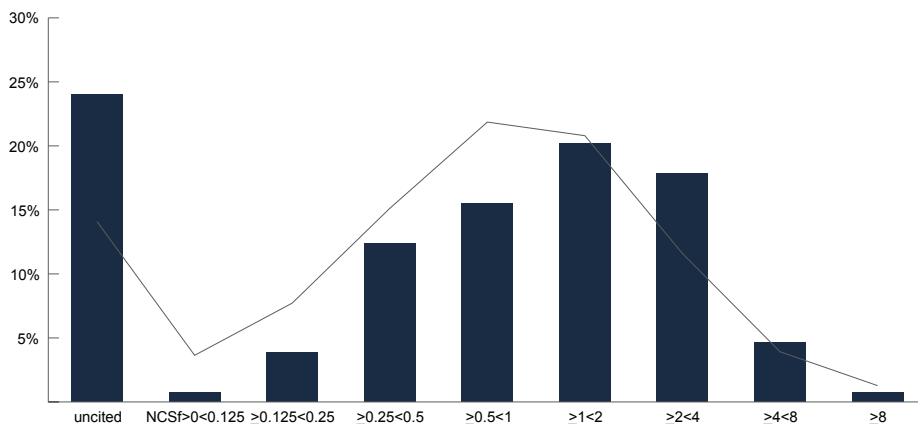
The h number papers that have at least h citations each.

AUTHOR MEAN (A_{Um}) **4.2**

Mean number of authors per paper.

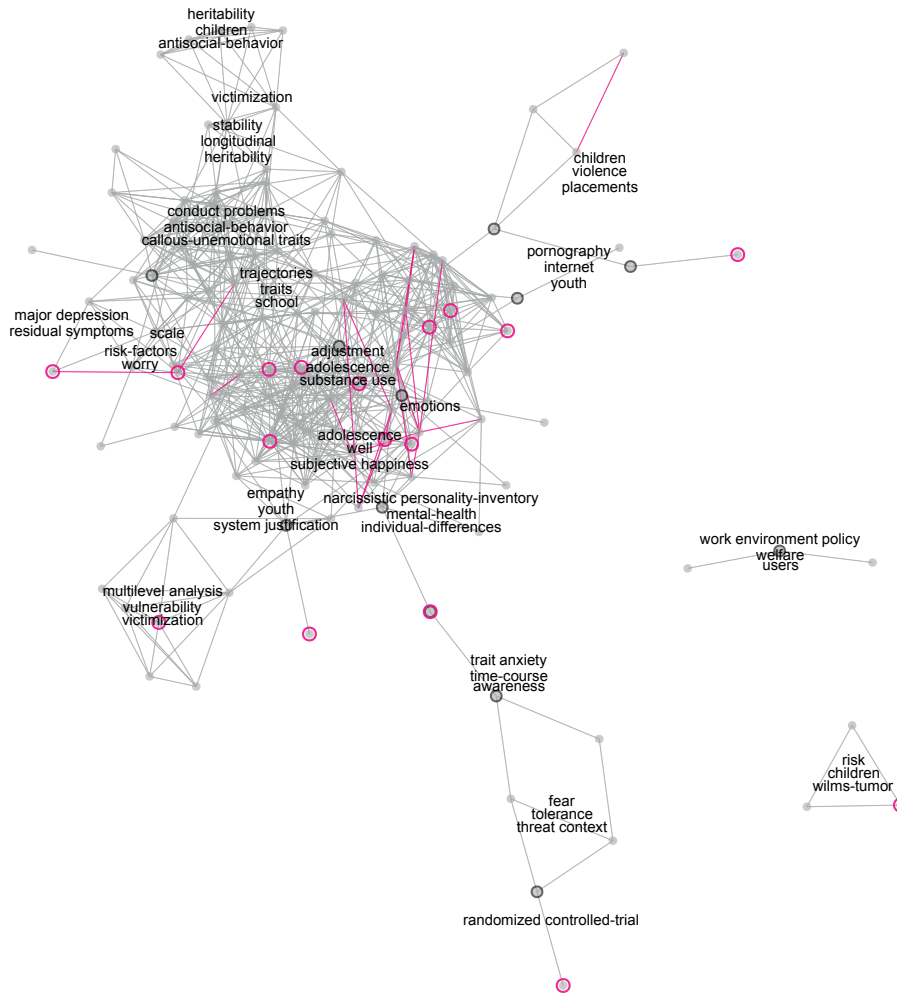
INTERNATIONAL COLLABORATION MEAN (IntCOLL_m) **1.5**

Mean number of countries per paper.



Citation profile: The distribution of field normalized citation score for proj_UOA_jps_v2 (bars) compared with all papers attributed to Swedish Universities (line).

PUBLICATION PROFILE



The map shows papers (nodes) published by proj_UOA_ips_v2. Relations (edges) are based on bibliographic coupling. Most frequent keywords are displayed for groups of related papers. Papers with high field normalized citation score (>3) are marked with a pink border. Edges between publications with high vitality (>1.2) are drawn in pink.

MOST FREQUENT JOURNALS

- J ADOLESCENCE (7)
- PERS INDIV DIFFER (6)
- J YOUTH ADOLESCENCE (5)
- DEV PSYCHOL (5)
- J ABNORM CHILD PSYCH (4)
- EUR J PERSONALITY (4)
- BEHAV GENET (4)
- J RES ADOLESCENCE (3)
- J PSYCHOPATHOL BEHAV (3)
- J ABNORM PSYCHOL (3)
- INT J LAW PSYCHIAT (3)
- INT J BEHAV DEV (3)

MOST FREQUENT COLLABORATORS

- OREBRO UNIV (111)
- PENN UNIV (21)
- UTRECHT UNIV (15)
- TURIN UNIV (12)
- KAROLINSKA INST (12)
- SO CALIF UNIV (11)
- STOCKHOLM UNIV (10)
- GHENT UNIV (10)
- RADBOUD UNIV NIJMEGEN (9)
- MAASTRICHT UNIV (9)
- UPPSALA UNIV (8)
- LINKOPING UNIV (8)

MOST FREQUENT SUBFIELDS

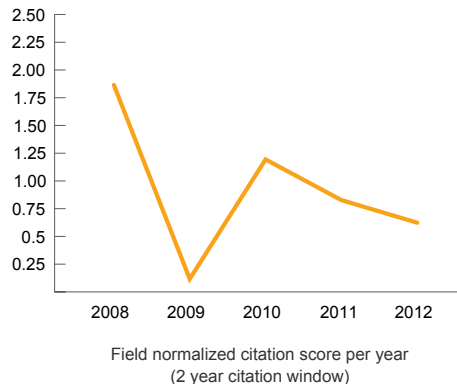
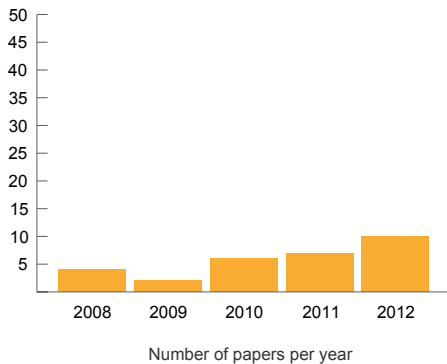
- PSYCHOLOGY (94)
- PSYCHIATRY (19)
- SOCIAL WORK (12)
- FAMILY STUDIES (10)
- BEHAVIORAL SCIENCES (8)
- SOCIOLOGY (7)
- PUBLIC, ENVIRONMENTAL & OCCUPATIONAL HEALTH (6)
- NEUROSCIENCES & NEUROLOGY (6)
- GENETICS & HEREDITY (6)
- CRIMINOLOGY & PENOLOGY (6)
- SUBSTANCE ABUSE (5)
- PEDIATRICS (4)



Subunit: Culinary Arts and Meal Science

BIBLIOMETRIC INDICATORS

NUMBER OF PAPERS (P)	29
Number of papers (articles, letters and reviews) published by UoA "PROJ_CULINARY_V1" during 2008-2012.	
NUMBER OF FRACTIONALIZED PAPERS (Frac P)	5.5
Sum of author fractionalized papers.	
CITATIONS PER PAPER (CPP)	5.7
Number of citations per paper.	
JOURNAL NORMALIZED CITATION SCORE (NCSj)	0.84
CPP normalized in relation to the UoA "PROJ_CULINARY_V1" journal set (average=1.00).	
NORMALIZED JOURNAL CITATION SCORE (NJCS)	1.10
The impact of the journal set normalized in relation to its sub-fields (average=1.00).	
FIELD NORMALIZED CITATION SCORE (NCSf)	0.87
CPP normalized in relation to the UoA "PROJ_CULINARY_V1" sub-field set (average=1.00).	
SUM OF FIELD NORMALIZED CITATION SCORE (Sum NCSf)	4.8
NCSf times Frac P.	
TOP 5 % (TOP5%)	0.0
Percentage of papers above the 95th citation percentile.	
VITALITY	1.06
Mean reference age normalized in relation to the sub-field set (average=1, higher=younger).	



BIBLIOMETRIC INDICATORS

PERCENTAGE NOT CITED PAPERS (PNC) **10**

Percentage of not cited papers during the period.

HIRSCH INDEX (h-index) **8**

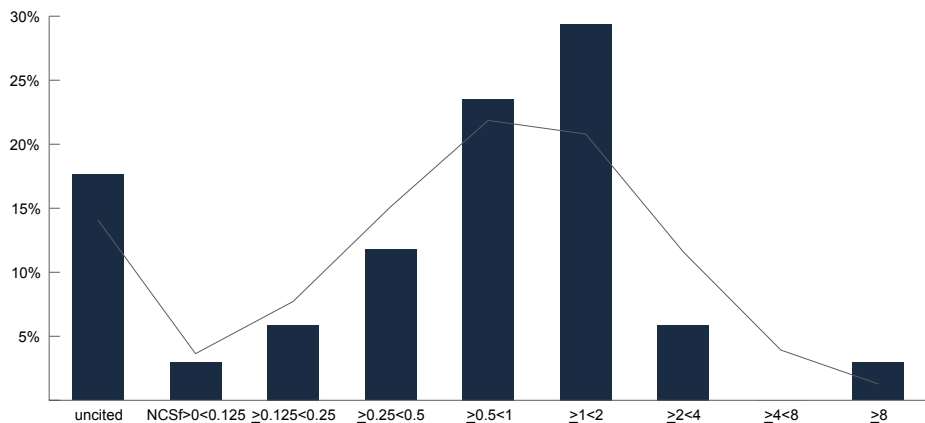
The h number papers that have at least h citations each.

AUTHOR MEAN (AUm) **6.8**

Mean number of authors per paper.

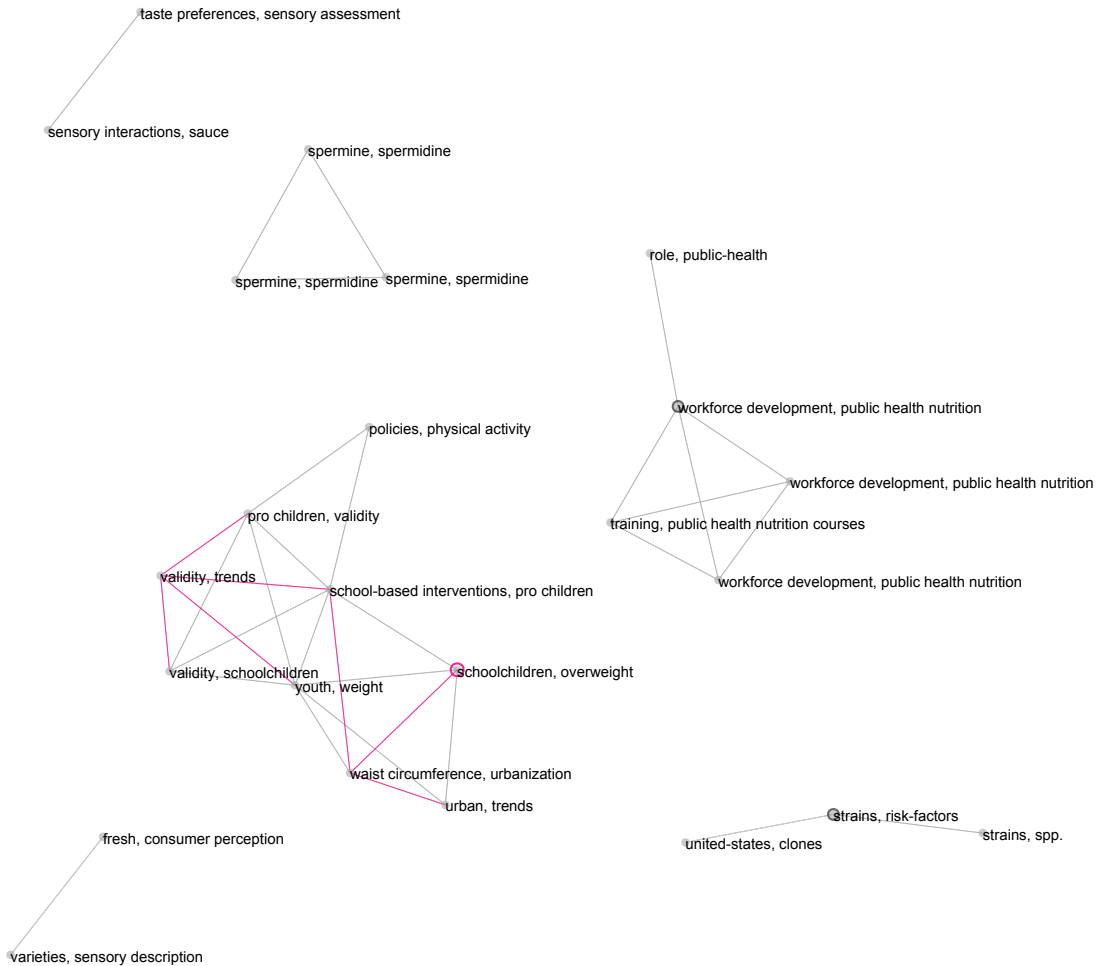
INTERNATIONAL COLLABORATION MEAN (IntCOLLm) **3.3**

Mean number of countries per paper.



Citation profile: The distribution of field normalized citation score for PROJ_CULINARY_V1 (bars) compared with all papers attributed to Swedish Universities (line).

Faculty of Humanities and Social Sciences; Humanities
Subunit: Culinary Arts and Meal Science
PUBLICATION PROFILE



The map shows papers (nodes) published by PROJ_CULINARY_V1.
 Relations (edges) are based on bibliographic coupling.
 Most frequent keywords are displayed for groups of related papers.
 Papers with high field normalized citation score (>3) are marked with a pink border.
 Edges between publications with high vitality (>1.2) are drawn in pink.

MOST FREQUENT JOURNALS

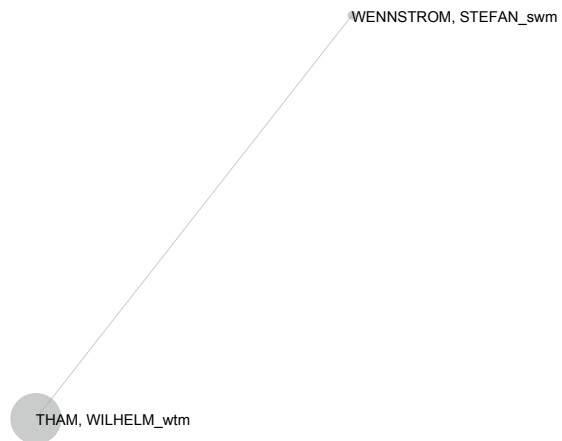
- PUBLIC HEALTH NUTR (4)
- OBES REV (3)
- NUTR REV (2)
- FOODBORNE PATHOG DIS (2)
- FOOD NUTR RES (2)
- PHYSIOL BEHAV (1)
- PEDIATRICS (1)
- PEDIATR OBES (1)
- MANAG SERV QUAL (1)
- J SENS STUD (1)
- J INTERF CYTOK RES (1)
- J HUM NUTR DIET (1)

MOST FREQUENT COLLABORATORS

- KAROLINSKA INST (30)
- OREBRO UNIV (12)
- GOTHENBURG UNIV (8)
- GHENT UNIV (7)
- VRIJE UNIV AMSTERDAM MED CTR (6)
- OREBRO UNIV HOSP (6)
- AKERSHUS UNIV COLL (6)
- TARTU UNIV (4)
- OSLO & AKERSHUS UNIV (4)
- DEPT HLTH NUTR & MANAGEMENT (4)
- OSLO UNIV (3)
- LANDSPITALI UNIV HOSP (3)

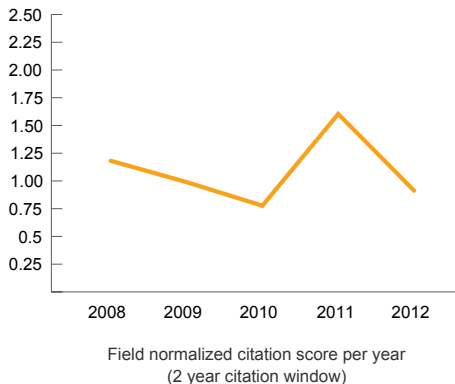
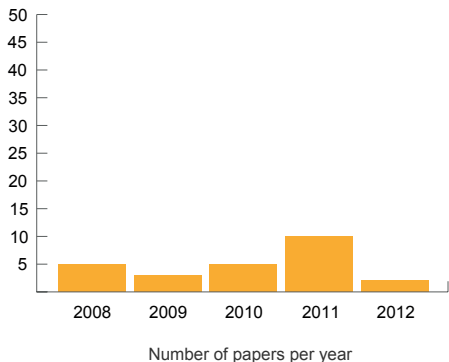
MOST FREQUENT SUBFIELDS

- NUTRITION & DIETETICS (12)
- PUBLIC, ENVIRONMENTAL & OCCUPATIONAL HEALTH (7)
- FOOD SCIENCE & TECHNOLOGY (7)
- ENDOCRINOLOGY & METABOLISM (4)
- PEDIATRICS (3)
- BUSINESS & ECONOMICS (2)
- VETERINARY SCIENCES (1)
- REPRODUCTIVE BIOLOGY (1)
- PSYCHOLOGY (1)
- PHYSIOLOGY (1)
- ONCOLOGY (1)
- OBSTETRICS & GYNECOLOGY (1)



Faculty of Humanities and Social Sciences; Humanities
Subunit: Media and Communication Studies
BIBLIOMETRIC INDICATORS

NUMBER OF PAPERS (P)	25
Number of papers (articles, letters and reviews) published by UoA "PROJ_MEDIA_V1" during 2008-2012.	
NUMBER OF FRACTIONALIZED PAPERS (Frac P)	19.5
Sum of author fractionalized papers.	
CITATIONS PER PAPER (CPP)	3.4
Number of citations per paper.	
JOURNAL NORMALIZED CITATION SCORE (NCSj)	1.17
CPP normalized in relation to the UoA "PROJ_MEDIA_V1" journal set (average=1.00).	
NORMALIZED JOURNAL CITATION SCORE (NJCS)	0.86
The impact of the journal set normalized in relation to its sub-fields (average=1.00).	
FIELD NORMALIZED CITATION SCORE (NCSf)	1.08
CPP normalized in relation to the UoA "PROJ_MEDIA_V1" sub-field set (average=1.00).	
SUM OF FIELD NORMALIZED CITATION SCORE (Sum NCSf)	21.0
NCSf times Frac P.	
TOP 5 % (TOP5%)	0.96
Percentage of papers above the 95th citation percentile.	
VITALITY	1.09
Mean reference age normalized in relation to the sub-field set (average=1, higher=younger).	



Faculty of Humanities and Social Sciences; Humanities
Subunit: Media and Communication Studies
BIBLIOMETRIC INDICATORS

PERCENTAGE NOT CITED PAPERS (PNC) **24**

Percentage of not cited papers during the period.

HIRSCH INDEX (h-index) **5**

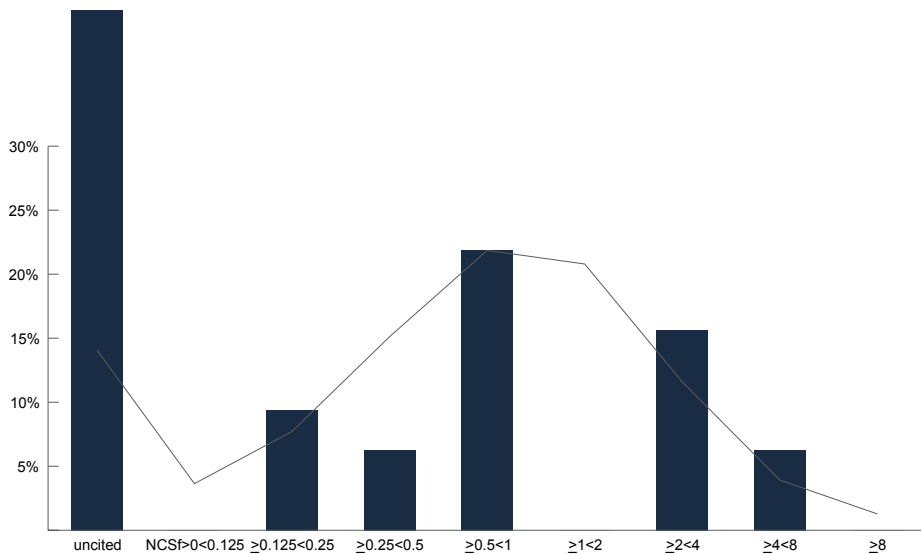
The h number papers that have at least h citations each.

AUTHOR MEAN (A_{Um}) **1.7**

Mean number of authors per paper.

INTERNATIONAL COLLABORATION MEAN (IntCOLL_m) **1.1**

Mean number of countries per paper.



Citation profile: The distribution of field normalized citation score for PROJ_MEDIA_V1 (bars) compared with all papers attributed to Swedish Universities (line).



The map shows papers (nodes) published by PROJ_MEDIA_V1.
 Relations (edges) are based on bibliographic coupling.
 Most frequent keywords are displayed for groups of related papers.
 Papers with high field normalized citation score (>3) are marked with a pink border.
 Edges between publications with high vitality (>1.2) are drawn in pink.

MOST FREQUENT JOURNALS

- JOURNALISM STUD (6)
- MEDIA CULT SOC (5)
- J LANG POLIT (3)
- TEXT TALK (2)
- VISUAL COMMUN-US (1)
- SEMIOTICA (1)
- SAFETY SCI (1)
- MOV IMAGE (1)
- MEDIA INT AJUST (1)
- LANG SOC (1)
- LANG POLICY-NETH (1)
- JOURNALISM (1)

MOST FREQUENT COLLABORATORS

- ÖREBRO UNIV (23)
- CARDIFF UNIV (5)
- LANCASTER UNIV (4)
- LEICESTER UNIV (2)
- GOTHENBURG UNIV (2)
- BRUNEL UNIV (2)
- STOCKHOLM UNIV (1)
- QUEENS UNIV BELFAST (1)
- NATL AGCY SPECIAL NEEDS EDUC & SCH (1)
- JONKOPING UNIV (1)
- HUMBOLDT UNIV (1)
- GLAMORGAN UNIV (1)

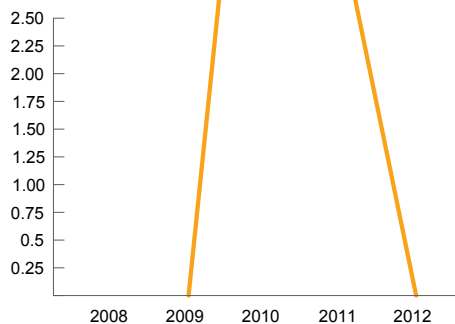
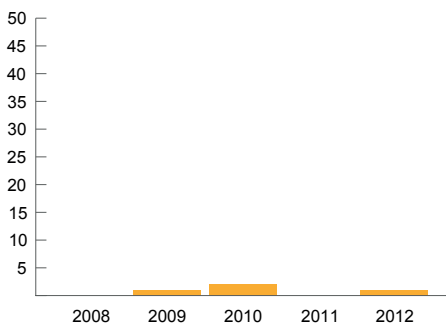
MOST FREQUENT SUBFIELDS

- COMMUNICATION (21)
- SOCIOLOGY (8)
- LINGUISTICS (8)
- SOCIAL SCIENCES - OTHER TOPICS (1)
- PUBLIC ADMINISTRATION (1)
- PSYCHOLOGY, MULTIDISCIPLINARY (1)
- OPERATIONS RESEARCH & MANAGEMENT SCIENCE (1)
- GOVERNMENT & LAW (1)
- FILM, RADIO & TELEVISION (1)
- ENVIRONMENTAL SCIENCES & ECOLOGY (1)
- ENGINEERING (1)
- EDUCATION & EDUCATIONAL RESEARCH (1)



BIBLIOMETRIC INDICATORS

NUMBER OF PAPERS (P)	4
Number of papers (articles, letters and reviews) published by UoA "PROJ_ARTS_V1" during 2008-2012.	
NUMBER OF FRACTIONALIZED PAPERS (Frac P)	3.5
Sum of author fractionalized papers.	
CITATIONS PER PAPER (CPP)	2.6
Number of citations per paper.	
JOURNAL NORMALIZED CITATION SCORE (NCSj)	1.10
CPP normalized in relation to the UoA "PROJ_ARTS_V1" journal set (average=1.00).	
NORMALIZED JOURNAL CITATION SCORE (NJCS)	0.96
The impact of the journal set normalized in relation to its sub-fields (average=1.00).	
FIELD NORMALIZED CITATION SCORE (NCSf)	3.17
CPP normalized in relation to the UoA "PROJ_ARTS_V1" sub-field set (average=1.00).	
SUM OF FIELD NORMALIZED CITATION SCORE (Sum NCSf)	11.1
NCSf times Frac P.	
TOP 5 % (TOP5%)	14.29
Percentage of papers above the 95th citation percentile.	
VITALITY	1.25
Mean reference age normalized in relation to the sub-field set (average=1, higher=younger).	



BIBLIOMETRIC INDICATORS

PERCENTAGE NOT CITED PAPERS (PNC) **50**

Percentage of not cited papers during the period.

HIRSCH INDEX (h-index) **1**

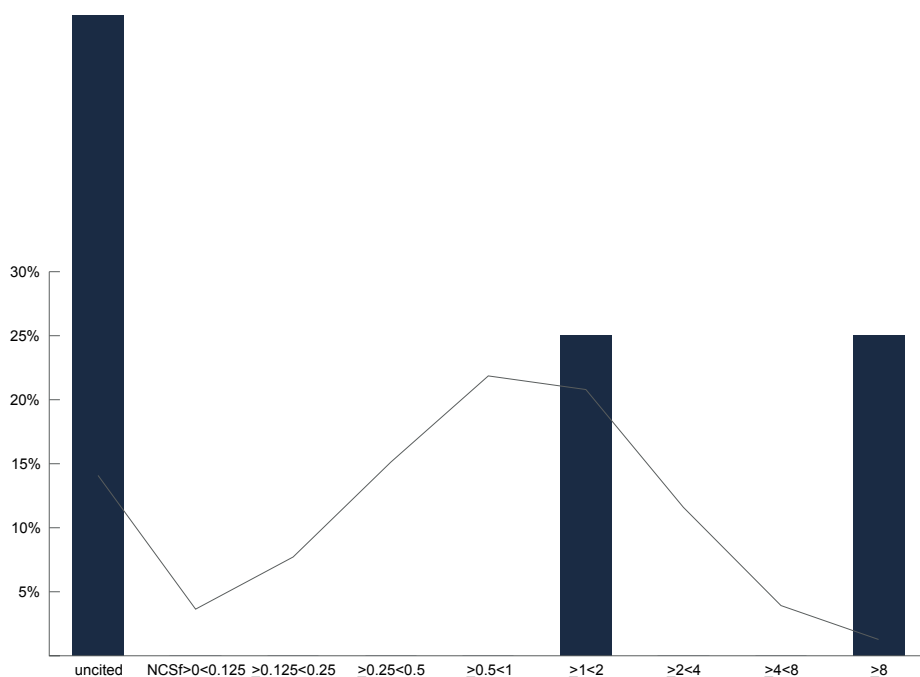
The h number papers that have at least h citations each.

AUTHOR MEAN (AUm) **1.8**

Mean number of authors per paper.

INTERNATIONAL COLLABORATION MEAN (IntCOLLm) **1.0**

Mean number of countries per paper.



Citation profile: The distribution of field normalized citation score for PROJ_ARTS_V1 (bars) compared with all papers attributed to Swedish Universities (line).

The map shows papers (nodes) published by PROJ_ARTS_V1.
Relations (edges) are based on bibliographic coupling.
Most frequent keywords are displayed for groups of related papers.
Papers with high field normalized citation score (>3) are marked with a pink border.
Edges between publications with high vitality (>1.2) are drawn in pink.

MOST FREQUENT JOURNALS

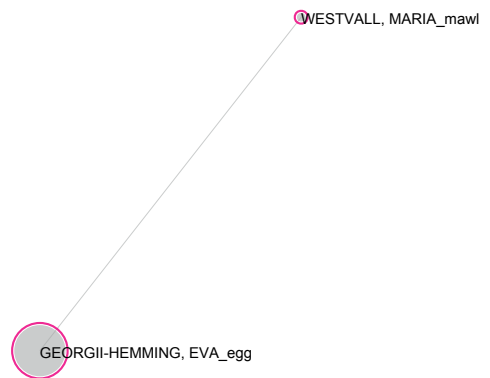
BRIT J MUSIC EDUC (2)
POP MUSIC (1)
MUSIC SCI (1)
MUSIC EDUC RES (1)

MOST FREQUENT COLLABORATORS

OREBRO UNIV (4)
YORK UNIV (1)

MOST FREQUENT SUBFIELDS

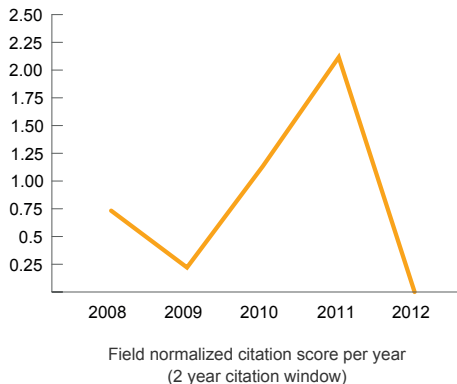
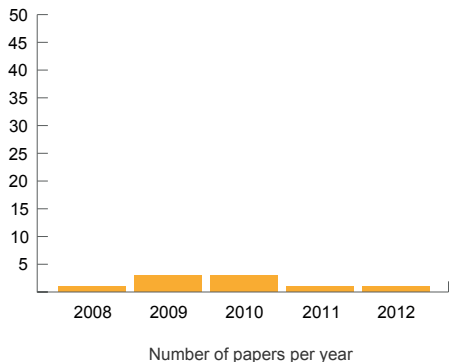
MUSIC (5)
EDUCATION & EDUCATIONAL RESEARCH (3)
PSYCHOLOGY (1)



Subunit: Education

BIBLIOMETRIC INDICATORS

NUMBER OF PAPERS (P)	9
Number of papers (articles, letters and reviews) published by UoA "PROJ_EDUCATION_V1" during 2008-2012.	
NUMBER OF FRACTIONALIZED PAPERS (Frac P)	5.2
Sum of author fractionalized papers.	
CITATIONS PER PAPER (CPP)	2.2
Number of citations per paper.	
JOURNAL NORMALIZED CITATION SCORE (NCSj)	0.51
CPP normalized in relation to the UoA "PROJ_EDUCATION_V1" journal set (average=1.00).	
NORMALIZED JOURNAL CITATION SCORE (NJCS)	0.72
The impact of the journal set normalized in relation to its sub-fields (average=1.00).	
FIELD NORMALIZED CITATION SCORE (NCSf)	0.54
CPP normalized in relation to the UoA "PROJ_EDUCATION_V1" sub-field set (average=1.00).	
SUM OF FIELD NORMALIZED CITATION SCORE (Sum NCSf)	2.8
NCSf times Frac P.	
TOP 5 % (TOP5%)	0.0
Percentage of papers above the 95th citation percentile.	
VITALITY	0.91
Mean reference age normalized in relation to the sub-field set (average=1, higher=younger).	



Subunit: Education

BIBLIOMETRIC INDICATORS

PERCENTAGE NOT CITED PAPERS (PNC) **44**

Percentage of not cited papers during the period.

HIRSCH INDEX (h-index) **3**

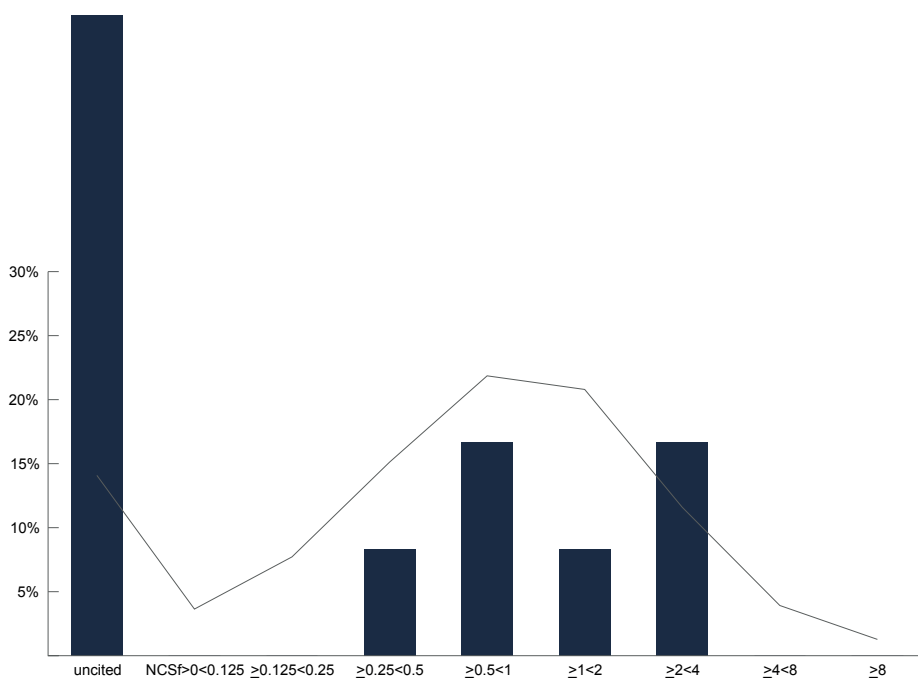
The h number papers that have at least h citations each.

AUTHOR MEAN (AUm) **2.0**

Mean number of authors per paper.

INTERNATIONAL COLLABORATION MEAN (IntCOLLm) **1.1**

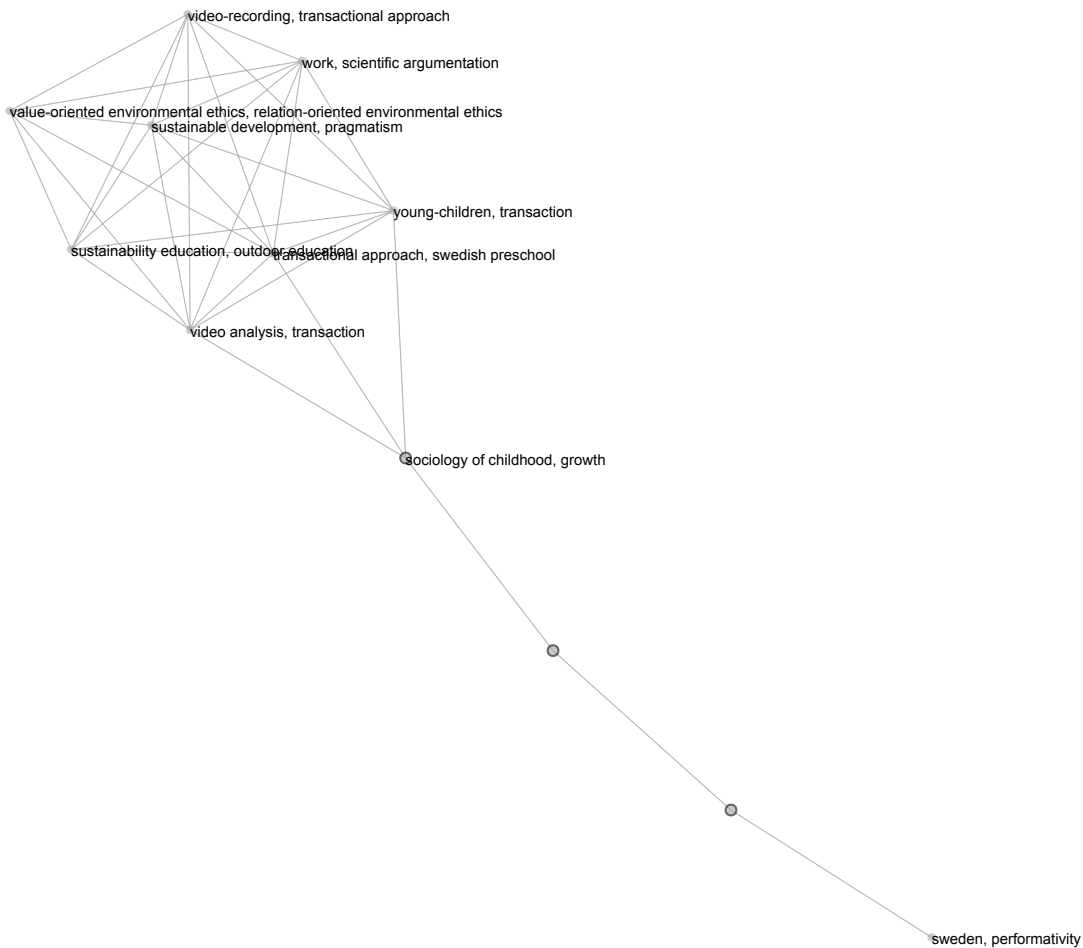
Mean number of countries per paper.



Citation profile: The distribution of field normalized citation score for PROJ_EDUCATION_V1 (bars) compared with all papers attributed to Swedish Universities (line).

Subunit: Education

PUBLICATION PROFILE



The map shows papers (nodes) published by PROJ_EDUCATION_V1.
Relations (edges) are based on bibliographic coupling.
Most frequent keywords are displayed for groups of related papers.
Papers with high field normalized citation score (>3) are marked with a pink border.
Edges between publications with high vitality (>1.2) are drawn in pink.

MOST FREQUENT JOURNALS

- ENVIRON EDUC RES (4)
- J HUM RIGHTS (2)
- EUR EARLY CHILD EDUC (2)
- STUD PHILOS EDUC (1)
- SPORT EDUC SOC (1)
- SCI EDUC (1)
- LEARN MEDIA TECHNOL (1)
- J CURRICULUM STUD (1)
- COMP EDUC (1)
- BRIT J SOCIOL EDUC (1)

MOST FREQUENT COLLABORATORS MOST FREQUENT SUBFIELDS

- OREBRO UNIV (19)
- UPPSALA UNIV (5)
- SKOVDE UNIV (2)
- KARLSTAD UNIV (1)
- HUMBOLDT UNIV (1)

- EDUCATION & EDUCATIONAL RESEARCH (13)
- ENVIRONMENTAL SCIENCES & ECOLOGY (4)
- INTERNATIONAL RELATIONS (2)
- GOVERNMENT & LAW (2)
- SPORT SCIENCES (1)
- SOCIOLOGY (1)
- SOCIAL SCIENCES - OTHER TOPICS (1)
- PHILOSOPHY (1)

Faculty of Humanities and Social Sciences; Education and Social Sciences

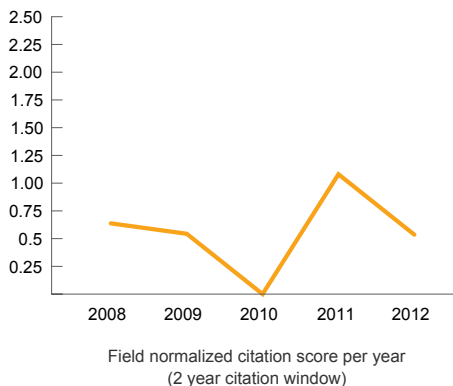
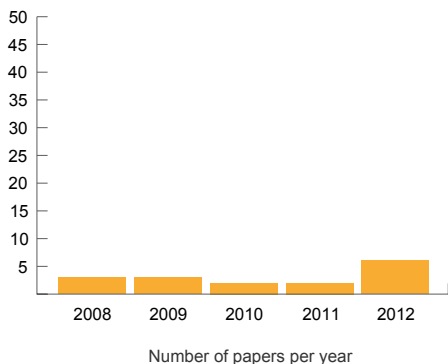
Subunit: Education

COLLABORATION NETWORK

Subunit: Gender Studies

BIBLIOMETRIC INDICATORS

NUMBER OF PAPERS (P)	16
Number of papers (articles, letters and reviews) published by UoA "PROJ_GENDER_V1" during 2008-2012.	
NUMBER OF FRACTIONALIZED PAPERS (Frac P)	9.8
Sum of author fractionalized papers.	
CITATIONS PER PAPER (CPP)	2.2
Number of citations per paper.	
JOURNAL NORMALIZED CITATION SCORE (NCSj)	1.03
CPP normalized in relation to the UoA "PROJ_GENDER_V1" journal set (average=1.00).	
NORMALIZED JOURNAL CITATION SCORE (NJCS)	0.66
The impact of the journal set normalized in relation to its sub-fields (average=1.00).	
FIELD NORMALIZED CITATION SCORE (NCSf)	0.79
CPP normalized in relation to the UoA "PROJ_GENDER_V1" sub-field set (average=1.00).	
SUM OF FIELD NORMALIZED CITATION SCORE (Sum NCSf)	7.7
NCSf times Frac P.	
TOP 5 % (TOP5%)	0.0
Percentage of papers above the 95th citation percentile.	
VITALITY	1.01
Mean reference age normalized in relation to the sub-field set (average=1, higher=younger).	



BIBLIOMETRIC INDICATORS

PERCENTAGE NOT CITED PAPERS (PNC) **19**

Percentage of not cited papers during the period.

HIRSCH INDEX (h-index) **4**

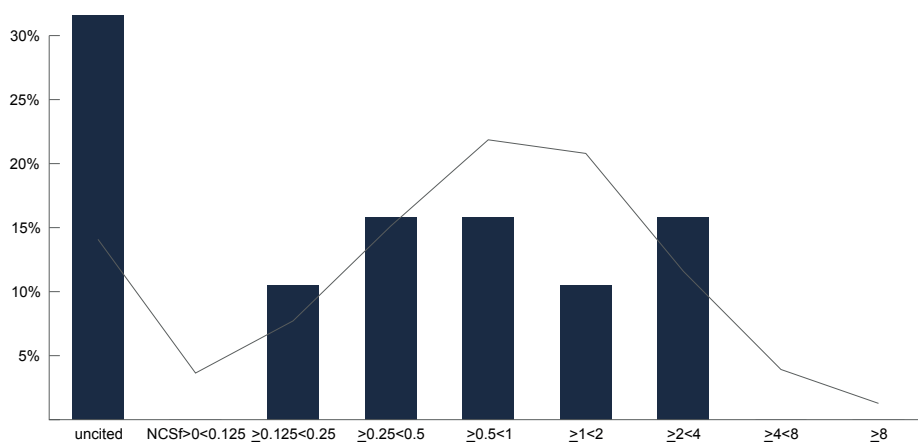
The h number papers that have at least h citations each.

AUTHOR MEAN (AUm) **2.5**

Mean number of authors per paper.

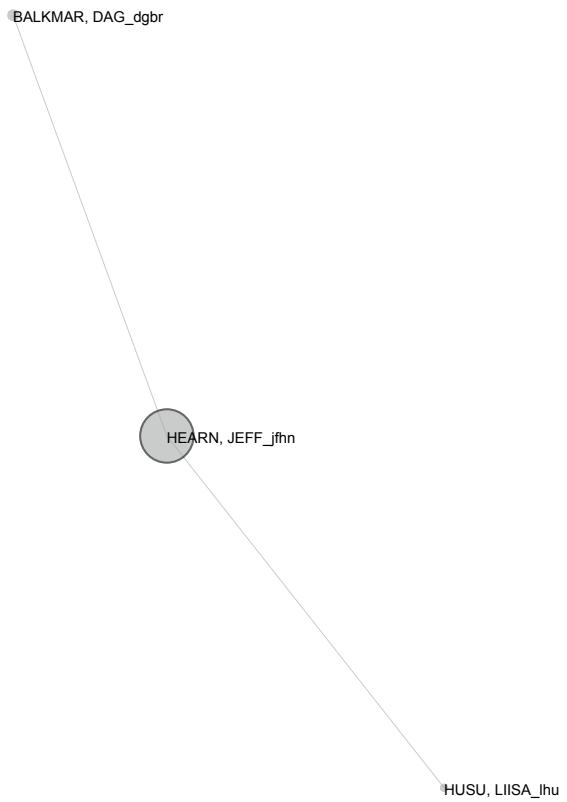
INTERNATIONAL COLLABORATION MEAN (IntCOLLm) **1.8**

Mean number of countries per paper.



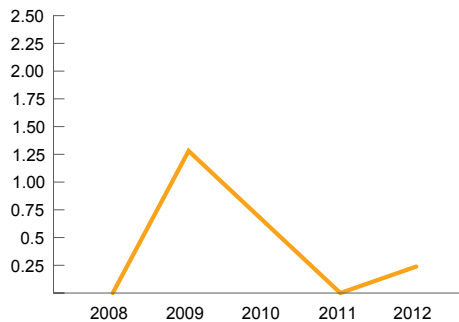
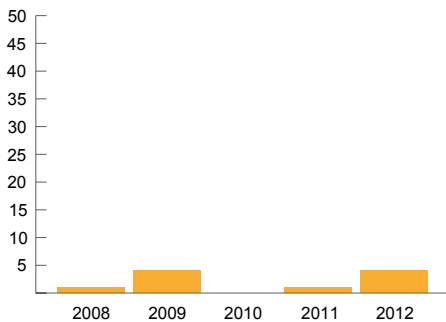
Citation profile: The distribution of field normalized citation score for PROJ_GENDER_V1 (bars) compared with all papers attributed to Swedish Universities (line).

COLLABORATION NETWORK



BIBLIOMETRIC INDICATORS

NUMBER OF PAPERS (P)	10
Number of papers (articles, letters and reviews) published by UoA "PROJ_POLITICAL_V1" during 2008-2012.	
NUMBER OF FRACTIONALIZED PAPERS (Frac P)	8.3
Sum of author fractionalized papers.	
CITATIONS PER PAPER (CPP)	3.7
Number of citations per paper.	
JOURNAL NORMALIZED CITATION SCORE (NCSj)	0.54
CPP normalized in relation to the UoA "PROJ_POLITICAL_V1" journal set (average=1.00).	
NORMALIZED JOURNAL CITATION SCORE (NJCS)	1.05
The impact of the journal set normalized in relation to its sub-fields (average=1.00).	
FIELD NORMALIZED CITATION SCORE (NCSf)	0.87
CPP normalized in relation to the UoA "PROJ_POLITICAL_V1" sub-field set (average=1.00).	
SUM OF FIELD NORMALIZED CITATION SCORE (Sum NCSf)	7.3
NCSf times Frac P.	
TOP 5 % (TOP5%)	6.00
Percentage of papers above the 95th citation percentile.	
VITALITY	1.08
Mean reference age normalized in relation to the sub-field set (average=1, higher=younger).	



Subunit: Political Science

BIBLIOMETRIC INDICATORS

PERCENTAGE NOT CITED PAPERS (PNC) **40**

Percentage of not cited papers during the period.

HIRSCH INDEX (h-index) **3**

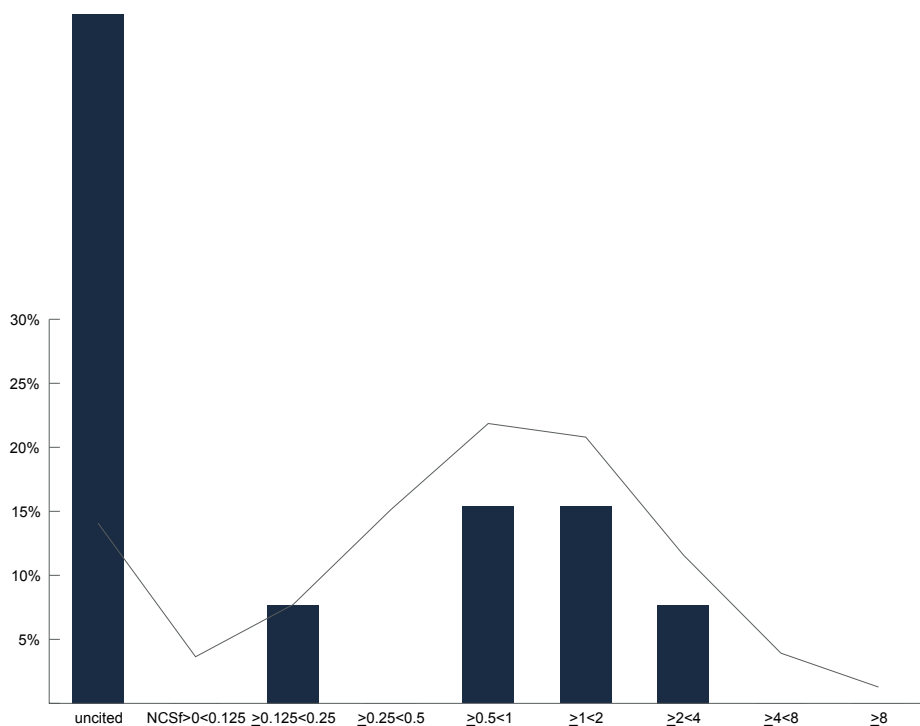
The h number papers that have at least h citations each.

AUTHOR MEAN (AUm) **1.9**

Mean number of authors per paper.

INTERNATIONAL COLLABORATION MEAN (IntCOLLm) **1.3**

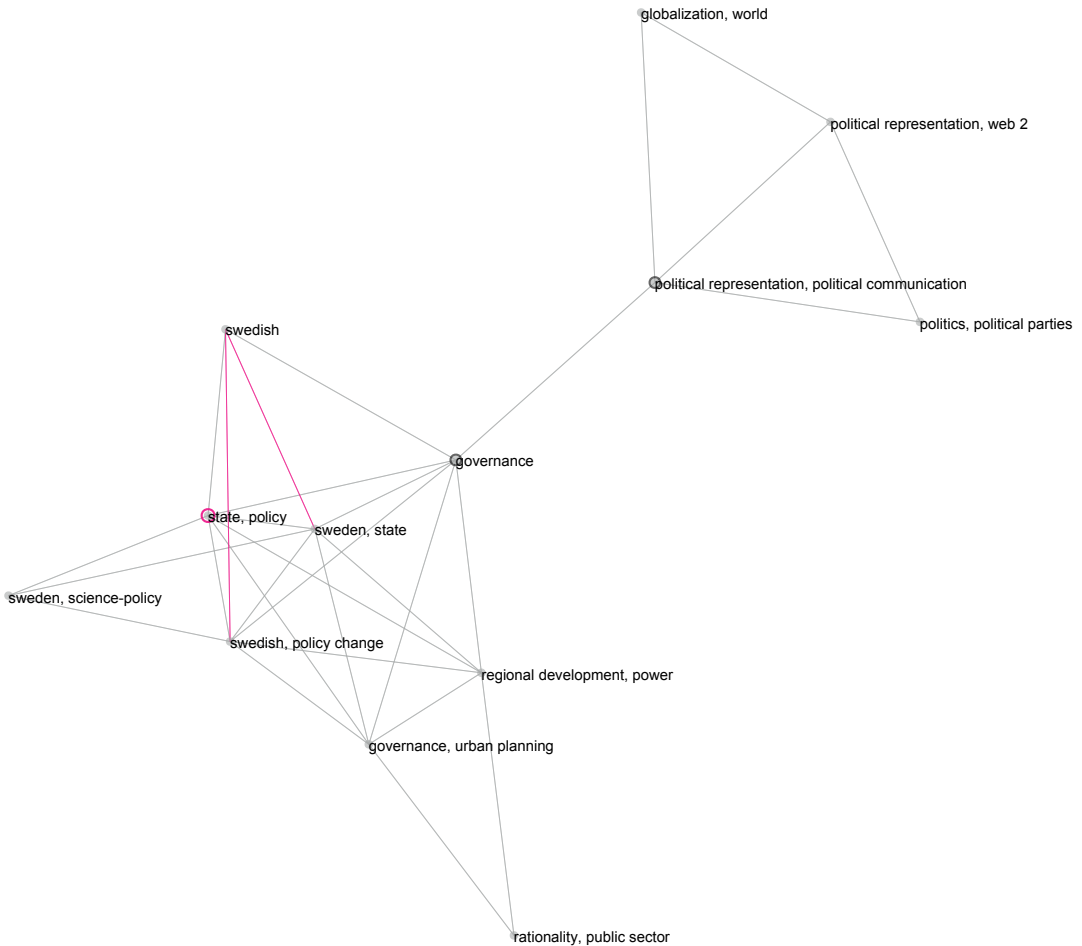
Mean number of countries per paper.



Citation profile: The distribution of field normalized citation score for PROJ_POLITICAL_V1 (bars) compared with all papers attributed to Swedish Universities (line).

Subunit: Political Science

PUBLICATION PROFILE



The map shows papers (nodes) published by PROJ_POLITICAL_V1. Relations (edges) are based on bibliographic coupling. Most frequent keywords are displayed for groups of related papers. Papers with high field normalized citation score (>3) are marked with a pink border. Edges between publications with high vitality (>1.2) are drawn in pink.

MOST FREQUENT JOURNALS

- LOCAL GOV STUD (2)
- GOV INFORM Q (2)
- ENVIRON POLIT (2)
- WOMEN STUD INT FORUM (1)
- PUBLIC ADMIN (1)
- POLIT COMMUN (1)
- J ENVIRON POL PLAN (1)
- INFORM COMMUN SOC (1)
- GOVERNANCE (1)
- ENVIRON PLANN C (1)

MOST FREQUENT COLLABORATORS MOST FREQUENT SUBFIELDS

- OREBRO UNIV (17)
- TEHRAN UNIV (1)
- TAMPERE UNIV (1)
- LULEA UNIV TECHNOL (1)
- BERGEN UNIV (1)

- GOVERNMENT & LAW (7)
- PUBLIC ADMINISTRATION (5)
- ENVIRONMENTAL SCIENCES & ECOLOGY (4)
- INFORMATION SCIENCE & LIBRARY SCIENCE (2)
- COMMUNICATION (2)
- WOMEN'S STUDIES (1)
- SOCIOLOGY (1)

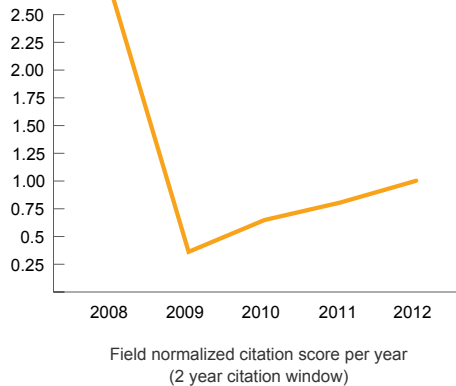
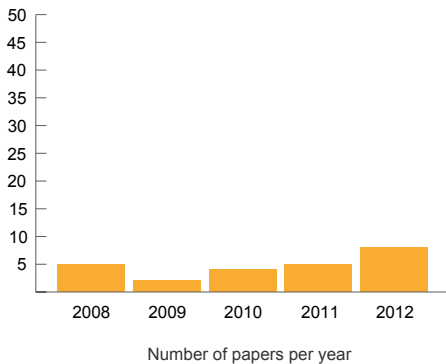
COLLABORATION NETWORK



Subunit: Sociology

BIBLIOMETRIC INDICATORS

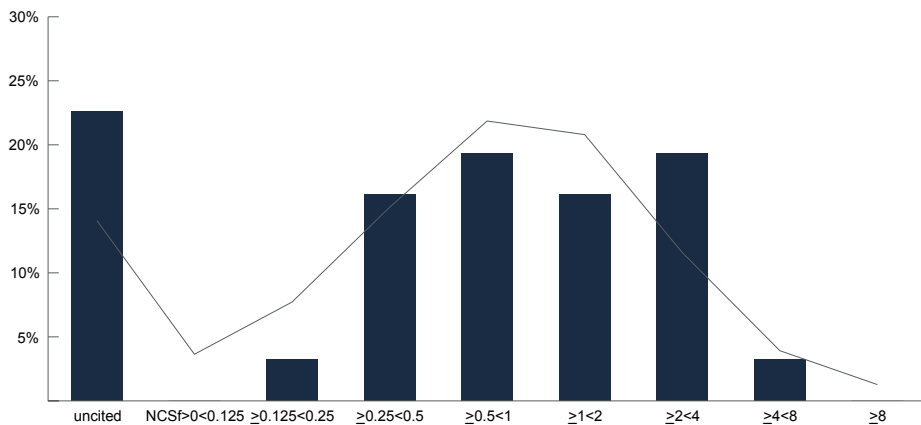
NUMBER OF PAPERS (P)	24
Number of papers (articles, letters and reviews) published by UoA "PROJ_SOCIOLOGY_V1" during 2008-2012.	
NUMBER OF FRACTIONALIZED PAPERS (Frac P)	16.2
Sum of author fractionalized papers.	
CITATIONS PER PAPER (CPP)	4.9
Number of citations per paper.	
JOURNAL NORMALIZED CITATION SCORE (NCSj)	1.43
CPP normalized in relation to the UoA "PROJ_SOCIOLOGY_V1" journal set (average=1.00).	
NORMALIZED JOURNAL CITATION SCORE (NJCS)	0.97
The impact of the journal set normalized in relation to its sub-fields (average=1.00).	
FIELD NORMALIZED CITATION SCORE (NCSf)	1.24
CPP normalized in relation to the UoA "PROJ_SOCIOLOGY_V1" sub-field set (average=1.00).	
SUM OF FIELD NORMALIZED CITATION SCORE (Sum NCSf)	20.0
NCSf times Frac P.	
TOP 5 % (TOP5%)	8.37
Percentage of papers above the 95th citation percentile.	
VITALITY	1.0
Mean reference age normalized in relation to the sub-field set (average=1, higher=younger).	



Subunit: Sociology

BIBLIOMETRIC INDICATORS

PERCENTAGE NOT CITED PAPERS (PNC)	8
Percentage of not cited papers during the period.	
HIRSCH INDEX (h-index)	6
The h number papers that have at least h citations each.	
AUTHOR MEAN (AUm)	1.9
Mean number of authors per paper.	
INTERNATIONAL COLLABORATION MEAN (IntCOLLm)	1.1
Mean number of countries per paper.	



Citation profile: The distribution of field normalized citation score for PROJ_SOCIOLOGY_V1 (bars) compared with all papers attributed to Swedish Universities (line).

Subunit: Sociology

PUBLICATION PROFILE



The map shows papers (nodes) published by PROJ_SOCIOLOGY_V1. Relations (edges) are based on bibliographic coupling. Most frequent keywords are displayed for groups of related papers. Papers with high field normalized citation score (>3) are marked with a pink border. Edges between publications with high vitality (>1.2) are drawn in pink.

MOST FREQUENT JOURNALS

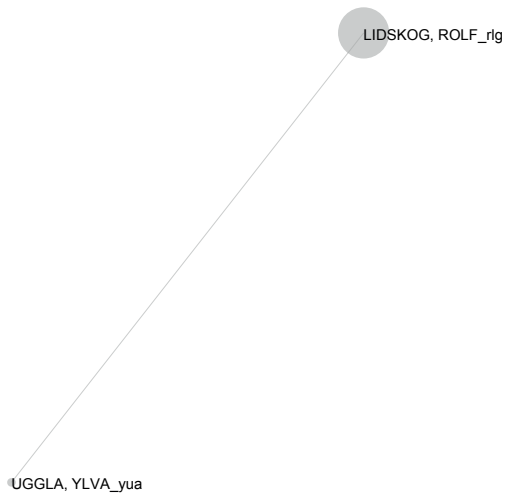
- NAT CULT (2)
- J RISK RES (2)
- J ENVIRON POL PLAN (2)
- J ENVIRON PLANN MAN (2)
- EUR SOCIOL REV (2)
- EUR SOC (2)
- SYST RES BEHAV SCI (1)
- SUSTAIN DEV (1)
- SOCIO-ECON REV (1)
- SOC POLIT (1)
- SOC NATUR RESOUR (1)
- SOC INDIC RES (1)

MOST FREQUENT COLLABORATORS

- OREBRO UNIV (22)
- BREMEN UNIV (5)
- STOCKHOLM UNIV (4)
- SODERTORN UNIV (4)
- UMEA UNIV (3)
- UFZ HELMHOLTZ CTR ENVIRONM RES (3)
- SWEDISH UNIV AGR SCI (2)
- WAGENINGEN UNIV (1)
- SWEDISH SOC NAT CONSERVAT (1)
- STOCKHOLM SCH ECON (1)
- STOCKHOLM CTR ORG RES (1)
- SODERTORN UNIV COLL (1)

MOST FREQUENT SUBFIELDS

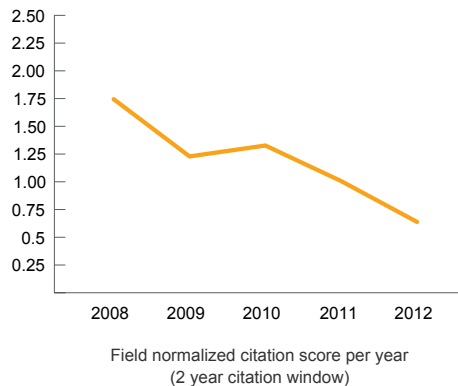
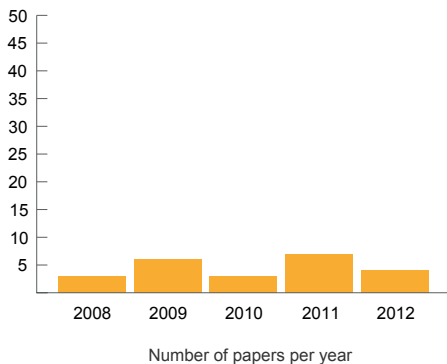
- ENVIRONMENTAL SCIENCES & ECOLOGY (16)
- SOCIOLOGY (11)
- SOCIAL SCIENCES - OTHER TOPICS (6)
- PUBLIC ADMINISTRATION (2)
- GOVERNMENT & LAW (2)
- BUSINESS & ECONOMICS (2)
- ANTHROPOLOGY (2)
- WOMEN'S STUDIES (1)
- SOCIAL ISSUES (1)
- INTERNATIONAL RELATIONS (1)
- HISTORY (1)
- GEOGRAPHY (1)



Subunit: Criminology

BIBLIOMETRIC INDICATORS

NUMBER OF PAPERS (P)	23
Number of papers (articles, letters and reviews) published by UoA "PROJ_CRIM_V1" during 2008-2012.	
NUMBER OF FRACTIONALIZED PAPERS (Frac P)	6.0
Sum of author fractionalized papers.	
CITATIONS PER PAPER (CPP)	9.4
Number of citations per paper.	
JOURNAL NORMALIZED CITATION SCORE (NCSj)	0.89
CPP normalized in relation to the UoA "PROJ_CRIM_V1" journal set (average=1.00).	
NORMALIZED JOURNAL CITATION SCORE (NJCS)	1.37
The impact of the journal set normalized in relation to its sub-fields (average=1.00).	
FIELD NORMALIZED CITATION SCORE (NCSf)	1.22
CPP normalized in relation to the UoA "PROJ_CRIM_V1" sub-field set (average=1.00).	
SUM OF FIELD NORMALIZED CITATION SCORE (Sum NCSf)	7.3
NCSf times Frac P.	
TOP 5 % (TOP5%)	1.32
Percentage of papers above the 95th citation percentile.	
VITALITY	0.98
Mean reference age normalized in relation to the sub-field set (average=1, higher=younger).	



BIBLIOMETRIC INDICATORS

PERCENTAGE NOT CITED PAPERS (PNC) **4**

Percentage of not cited papers during the period.

HIRSCH INDEX (h-index) **9**

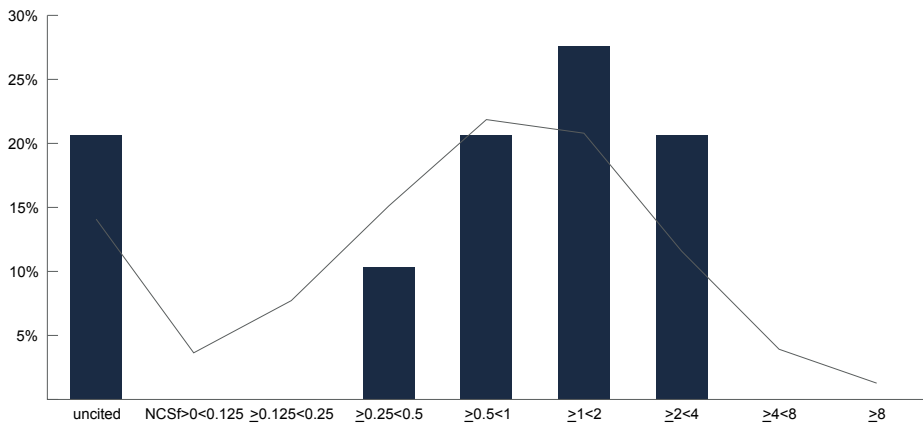
The h number papers that have at least h citations each.

AUTHOR MEAN (AU_m) **4.7**

Mean number of authors per paper.

INTERNATIONAL COLLABORATION MEAN (IntCOLL_m) **1.5**

Mean number of countries per paper.



Citation profile: The distribution of field normalized citation score for PROJ_CRIM_V1 (bars) compared with all papers attributed to Swedish Universities (line).

Subunit: Criminology

PUBLICATION PROFILE



The map shows papers (nodes) published by PROJ_CRIM_V1.
 Relations (edges) are based on bibliographic coupling.
 Most frequent keywords are displayed for groups of related papers.
 Papers with high field normalized citation score (>3) are marked with a pink border.
 Edges between publications with high vitality (>1.2) are drawn in pink.

MOST FREQUENT JOURNALS

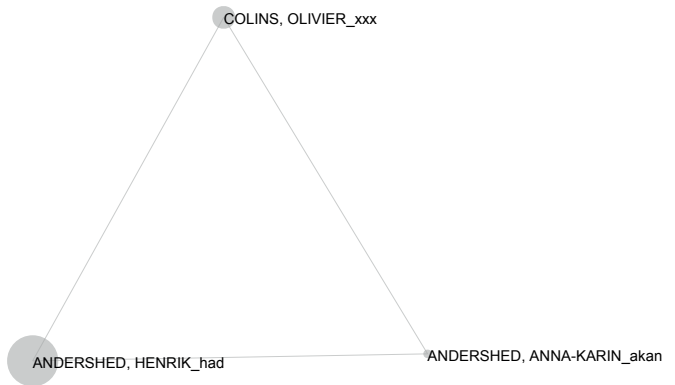
- BEHAV GENET (4)
- INT J LAW PSYCHIAT (3)
- J PSYCHOPATHOL BEHAV (2)
- J NERV MENT DIS (2)
- J ABNORM PSYCHOL (2)
- DEV PSYCHOPATHOL (2)
- PSYCHOPHYSIOLOGY (1)
- PERS INDIV DIFFER (1)
- J CHILD PSYCHOL PSYC (1)
- J ABNORMAL CHILD PSYCHOL (1)
- EUR J SOC WORK (1)
- EUR J PSYCHOL ASSESS (1)

MOST FREQUENT COLLABORATORS

- PENN UNIV (21)
- OREBRO UNIV (16)
- SO CALIF UNIV (11)
- LEIDEN UNIV (8)
- GHENT UNIV (7)
- KAROLINSKA INST (6)
- VRIJE UNIV AMSTERDAM (4)
- UTRECHT UNIV (3)
- STOCKHOLM UNIV (3)
- AUTONOMA CIUDAD JUAREZ UNIV (3)
- WASHINGTON UNIV (2)
- VRIJE UNIV AMSTERDAM MED CTR (2)

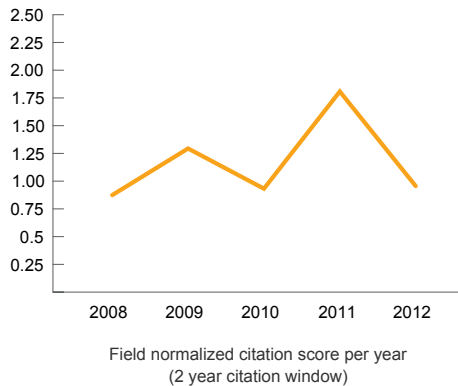
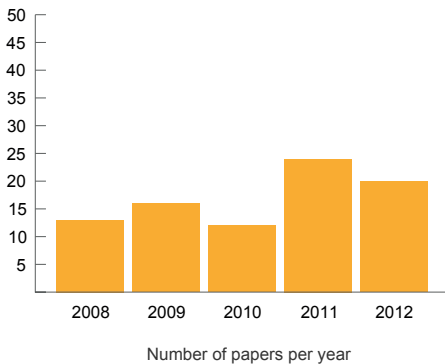
MOST FREQUENT SUBFIELDS

- PSYCHOLOGY (20)
- PSYCHIATRY (8)
- BEHAVIORAL SCIENCES (7)
- GENETICS & HEREDITY (4)
- GOVERNMENT & LAW (3)
- CRIMINOLOGY & PENOLOGY (3)
- SOCIAL WORK (2)
- PSYCHOLOGY, MULTIDISCIPLINARY (2)
- PSYCHOLOGY, DEVELOPMENTAL (2)
- PEDIATRICS (2)
- NEUROSCIENCES & NEUROLOGY (2)
- PSYCHOLOGY, EXPERIMENTAL (1)



BIBLIOMETRIC INDICATORS

NUMBER OF PAPERS (P)	85
Number of papers (articles, letters and reviews) published by UoA "PROJ_CHAMP_V1" during 2008-2012.	
NUMBER OF FRACTIONALIZED PAPERS (Frac P)	32.1
Sum of author fractionalized papers.	
CITATIONS PER PAPER (CPP)	7.8
Number of citations per paper.	
JOURNAL NORMALIZED CITATION SCORE (NCSj)	1.09
CPP normalized in relation to the UoA "PROJ_CHAMP_V1" journal set (average=1.00).	
NORMALIZED JOURNAL CITATION SCORE (NJCS)	1.13
The impact of the journal set normalized in relation to its sub-fields (average=1.00).	
FIELD NORMALIZED CITATION SCORE (NCSf)	1.32
CPP normalized in relation to the UoA "PROJ_CHAMP_V1" sub-field set (average=1.00).	
SUM OF FIELD NORMALIZED CITATION SCORE (Sum NCSf)	42.4
NCSf times Frac P.	
TOP 5 % (TOP5%)	6.67
Percentage of papers above the 95th citation percentile.	
VITALITY	1.02
Mean reference age normalized in relation to the sub-field set (average=1, higher=younger).	



BIBLIOMETRIC INDICATORS

PERCENTAGE NOT CITED PAPERS (PNC) **13**

Percentage of not cited papers during the period.

HIRSCH INDEX (h-index) **15**

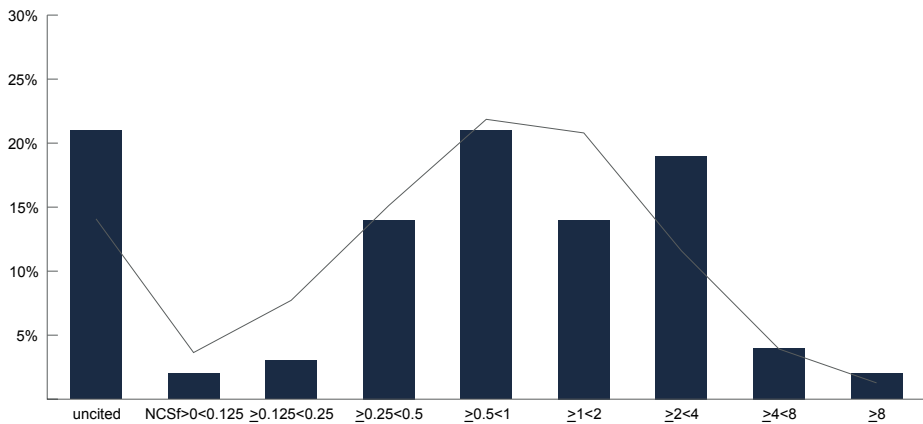
The h number papers that have at least h citations each.

AUTHOR MEAN (A_{Um}) **4.2**

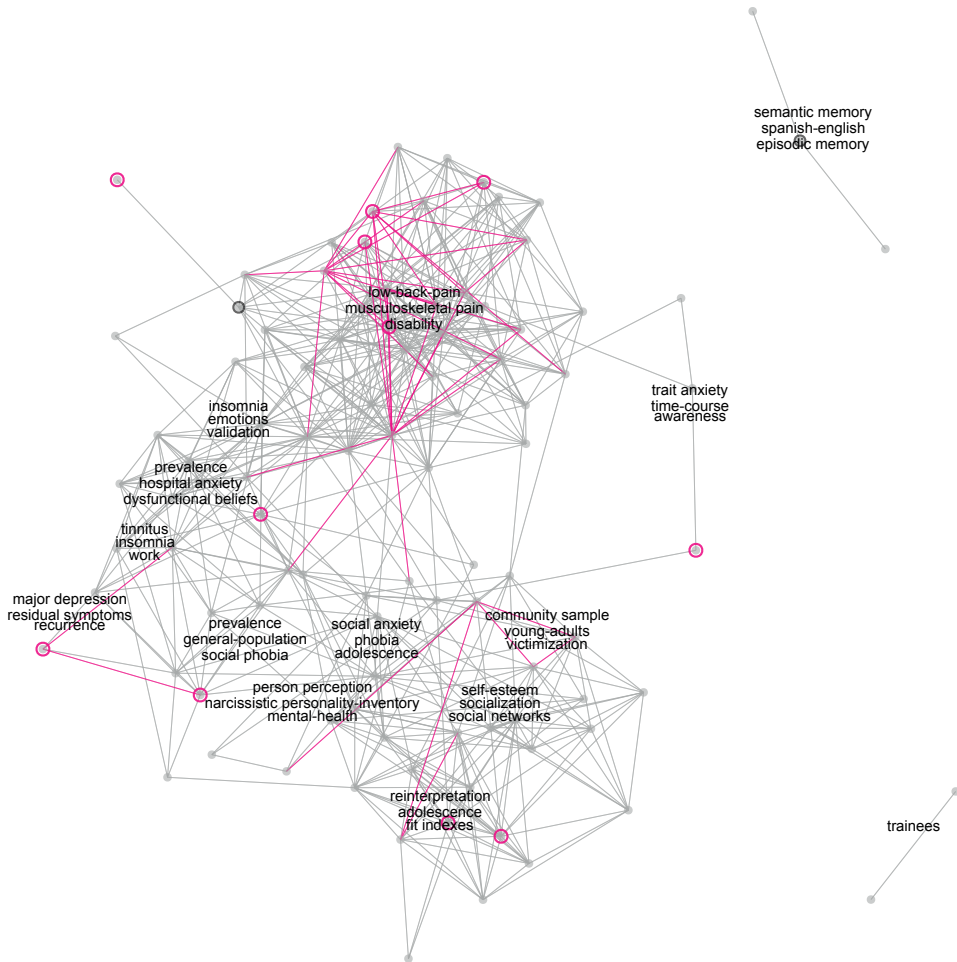
Mean number of authors per paper.

INTERNATIONAL COLLABORATION MEAN (IntCOLL_m) **1.7**

Mean number of countries per paper.



Citation profile: The distribution of field normalized citation score for PROJ_CHAMP_V1 (bars) compared with all papers attributed to Swedish Universities (line).



The map shows papers (nodes) published by PROJ. CHAMP_V1. Relations (edges) are based on bibliographic coupling. Most frequent keywords are displayed for groups of related papers. Papers with high field normalized citation score (>3) are marked with a pink border. Edges between publications with high vitality (>1.2) are drawn in pink.

MOST FREQUENT JOURNALS

- EUR J PAIN (9)
- PAIN (7)
- SCAND J PSYCHOL (4)
- PHYS THER (4)
- J YOUTH ADOLESCENCE (4)
- BRIT J HEALTH PSYCH (4)
- BEHAV RES THER (4)
- PERS INDIV DIFFER (3)
- J POSIT PSYCHOL (3)
- J ABNORM CHILD PSYCH (3)
- EUR J PERSONALITY (3)
- J PERS (2)

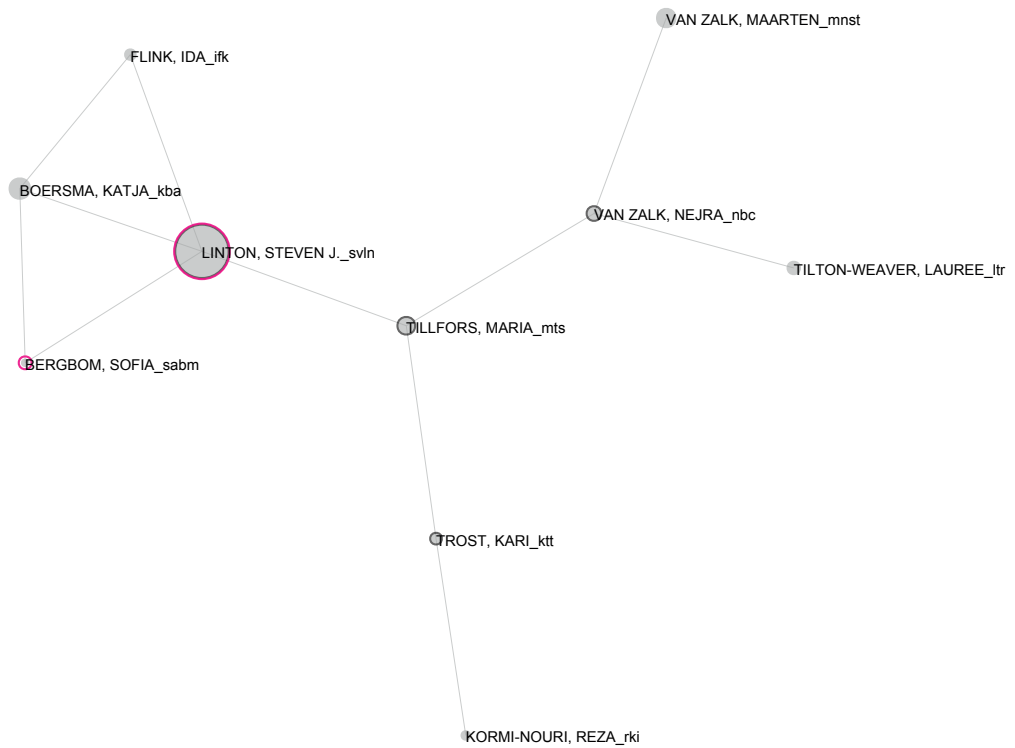
MOST FREQUENT COLLABORATORS

- OREBRO UNIV (106)
- MAASTRICHT UNIV (16)
- UPPSALA UNIV (14)
- UTRECHT UNIV (12)
- LINKOPING UNIV (11)
- STOCKHOLM UNIV (10)
- KAROLINSKA INST (8)
- OREBRO UNIV HOSP (7)
- LIBERTY MUTUAL RES INST SAFETY (7)
- SYDNEY UNIV (6)
- MASSACHUSETTS UNIV (6)
- GHENT UNIV (6)

MOST FREQUENT SUBFIELDS

- PSYCHOLOGY (60)
- NEUROSCIENCES & NEUROLOGY (20)
- ANESTHESIOLOGY (17)
- REHABILITATION (8)
- PSYCHIATRY (7)
- ORTHOPEDICS (6)
- PUBLIC, ENVIRONMENTAL & OCCUPATIONAL HEALTH (5)
- SOCIAL ISSUES (3)
- FAMILY STUDIES (3)
- SOCIOLOGY (2)
- NEUROSCIENCES (2)
- GENERAL & INTERNAL MEDICINE (2)

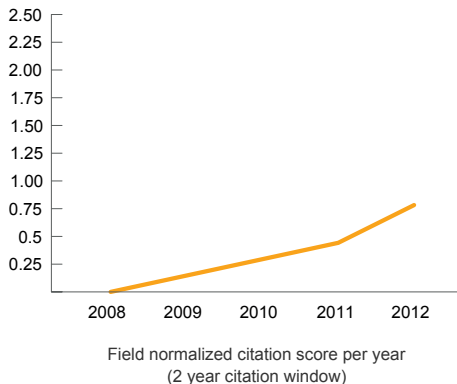
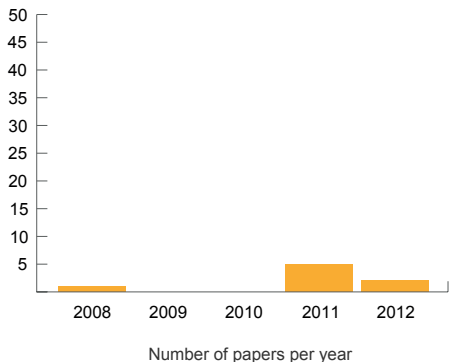
COLLABORATION NETWORK



Subunit: Social Work

BIBLIOMETRIC INDICATORS

NUMBER OF PAPERS (P)	8
Number of papers (articles, letters and reviews) published by UoA "PROJ_SC WORK_V1" during 2008-2012.	
NUMBER OF FRACTIONALIZED PAPERS (Frac P)	3.4
Sum of author fractionalized papers.	
CITATIONS PER PAPER (CPP)	0.8
Number of citations per paper.	
JOURNAL NORMALIZED CITATION SCORE (NCSj)	0.4
CPP normalized in relation to the UoA "PROJ_SC WORK_V1" journal set (average=1.00).	
NORMALIZED JOURNAL CITATION SCORE (NJCS)	0.93
The impact of the journal set normalized in relation to its sub-fields (average=1.00).	
FIELD NORMALIZED CITATION SCORE (NCSf)	0.44
CPP normalized in relation to the UoA "PROJ_SC WORK_V1" sub-field set (average=1.00).	
SUM OF FIELD NORMALIZED CITATION SCORE (Sum NCSf)	1.5
NCSf times Frac P.	
TOP 5 % (TOP5%)	0.0
Percentage of papers above the 95th citation percentile.	
VITALITY	1.13
Mean reference age normalized in relation to the sub-field set (average=1, higher=younger).	



Subunit: Social Work

BIBLIOMETRIC INDICATORS

PERCENTAGE NOT CITED PAPERS (PNC) **38**

Percentage of not cited papers during the period.

HIRSCH INDEX (h-index) **2**

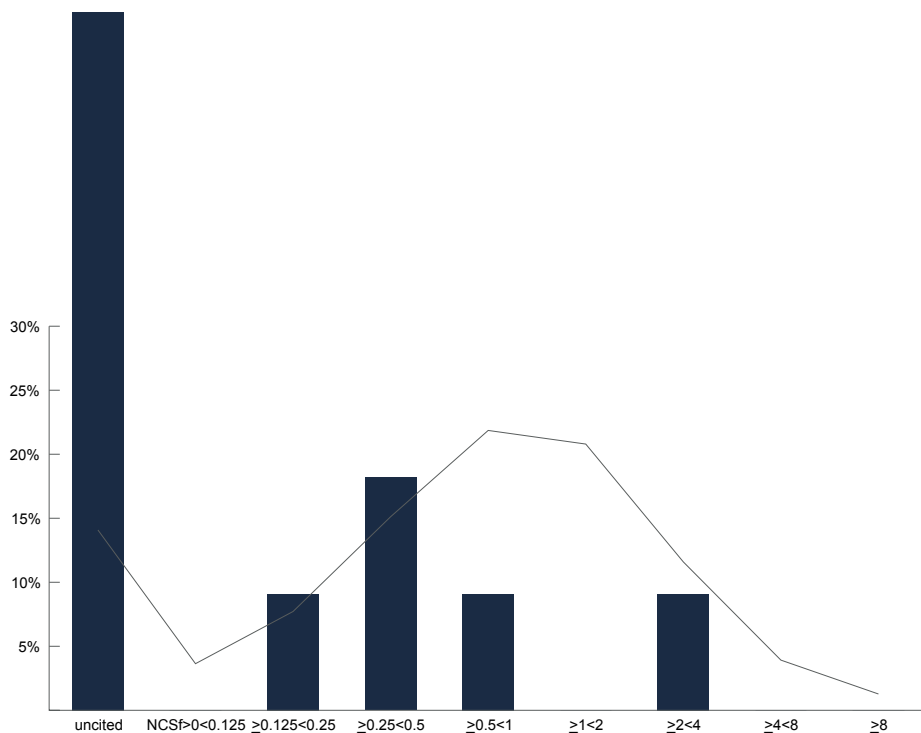
The h number papers that have at least h citations each.

AUTHOR MEAN (AUm) **3.8**

Mean number of authors per paper.

INTERNATIONAL COLLABORATION MEAN (IntCOLLm) **1.0**

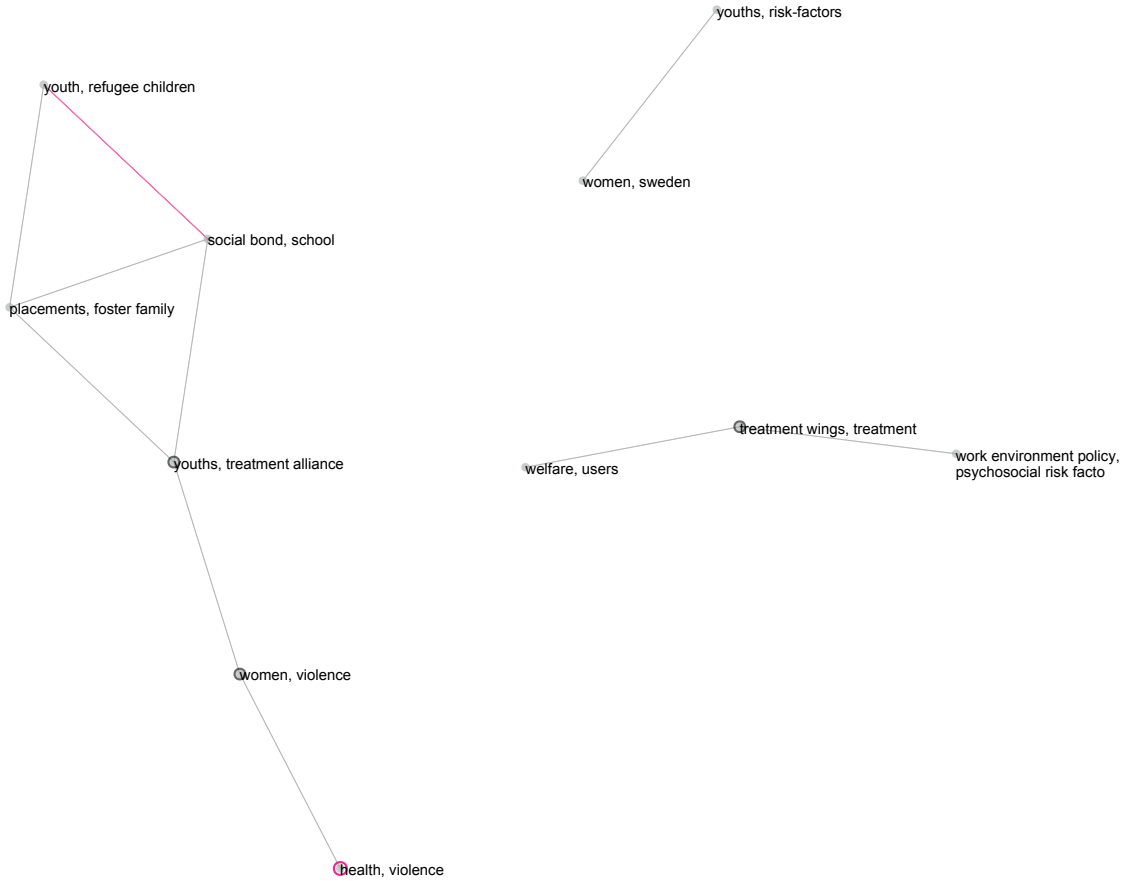
Mean number of countries per paper.



Citation profile: The distribution of field normalized citation score for PROJ_SC WORK_V1 (bars) compared with all papers attributed to Swedish Universities (line).

Subunit: Social Work

PUBLICATION PROFILE



The map shows papers (nodes) published by PROJ_SC WORK_V1.
 Relations (edges) are based on bibliographic coupling.
 Most frequent keywords are displayed for groups of related papers.
 Papers with high field normalized citation score (>3) are marked with a pink border.
 Edges between publications with high vitality (>1.2) are drawn in pink.

MOST FREQUENT JOURNALS

- CHILD FAM SOC WORK (3)
- EUR J CRIMINOL (2)
- TEACH HIGH EDUC (1)
- SAFETY SCI (1)
- NORD STUD ALCOHOL DR (1)
- MEN MASC (1)
- EUR J SOC WORK (1)
- EUR J CRIM POLICY RE (1)
- CHILD YOUTH SERV REV (1)
- CHILD ABUSE NEGLECT (1)
- AUST J GUID COUNS (1)

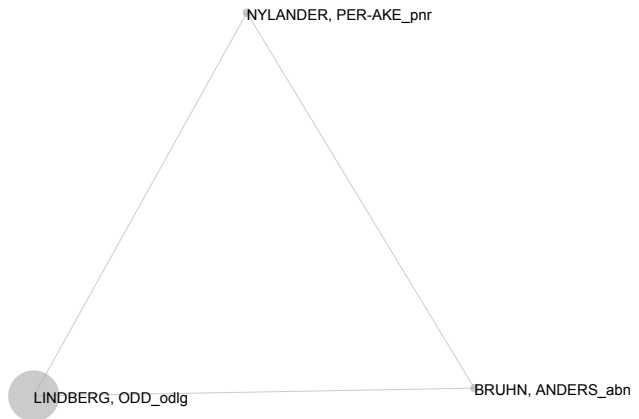
MOST FREQUENT COLLABORATORS

- OREBRO UNIV (14)
- MALARDALEN UNIV (3)
- NOTRE DAME UNIV (2)
- GOTHENBURG UNIV (2)
- UPPSALA UNIV (1)
- OREBRO CTY POLICE (1)
- MICHIGAN UNIV (1)
- MEMPHIS UNIV (1)
- LINKOPING UNIV (1)
- KARLSTAD UNIV (1)
- DALARNA UNIV (1)
- AARHUS UNIV (1)

MOST FREQUENT SUBFIELDS

- SOCIAL WORK (7)
- FAMILY STUDIES (5)
- CRIMINOLOGY & PENOLOGY (3)
- EDUCATION & EDUCATIONAL RESEARCH (2)
- SUBSTANCE ABUSE (1)
- SOCIOLOGY (1)
- PSYCHOLOGY (1)
- OPERATIONS RESEARCH & MANAGEMENT SCIENCE (1)
- ENGINEERING (1)

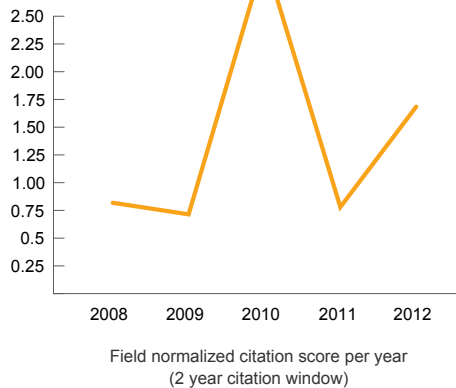
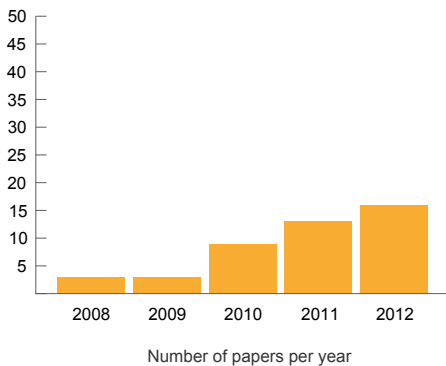
COLLABORATION NETWORK



Subunit: Youth & Society

BIBLIOMETRIC INDICATORS

NUMBER OF PAPERS (P)	44
Number of papers (articles, letters and reviews) published by UoA "PROJ_YOUTH_V1" during 2008-2012.	
NUMBER OF FRACTIONALIZED PAPERS (Frac P)	16.1
Sum of author fractionalized papers.	
CITATIONS PER PAPER (CPP)	7.0
Number of citations per paper.	
JOURNAL NORMALIZED CITATION SCORE (NCSj)	1.21
CPP normalized in relation to the UoA "PROJ_YOUTH_V1" journal set (average=1.00).	
NORMALIZED JOURNAL CITATION SCORE (NJCS)	1.16
The impact of the journal set normalized in relation to its sub-fields (average=1.00).	
FIELD NORMALIZED CITATION SCORE (NCSf)	1.58
CPP normalized in relation to the UoA "PROJ_YOUTH_V1" sub-field set (average=1.00).	
SUM OF FIELD NORMALIZED CITATION SCORE (Sum NCSf)	25.4
NCSf times Frac P.	
TOP 5 % (TOP5%)	13.27
Percentage of papers above the 95th citation percentile.	
VITALITY	1.03
Mean reference age normalized in relation to the sub-field set (average=1, higher=younger).	



BIBLIOMETRIC INDICATORS

PERCENTAGE NOT CITED PAPERS (PNC) **14**

Percentage of not cited papers during the period.

HIRSCH INDEX (h-index) **10**

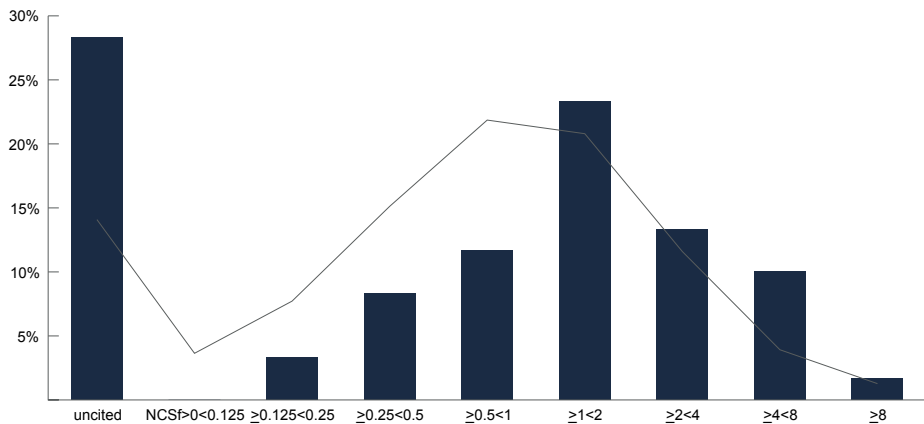
The h number papers that have at least h citations each.

AUTHOR MEAN (A_{Um}) **3.9**

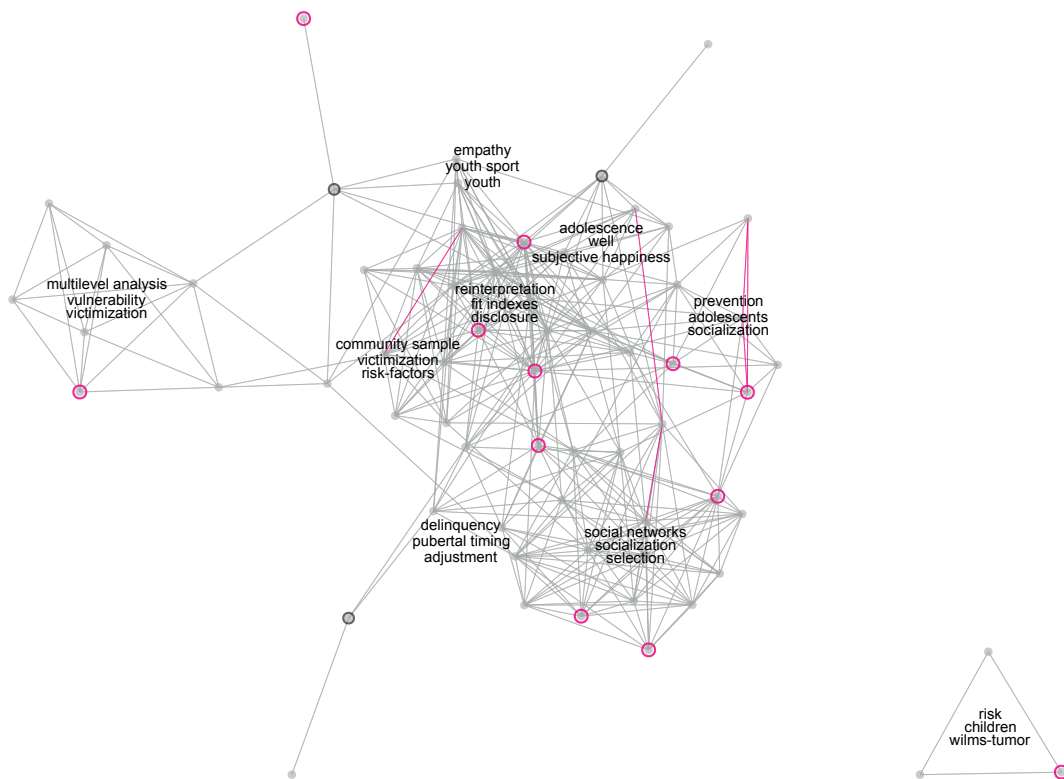
Mean number of authors per paper.

INTERNATIONAL COLLABORATION MEAN (IntCOLL_m) **1.4**

Mean number of countries per paper.



Citation profile: The distribution of field normalized citation score for PROJ_YOUTH_V1 (bars) compared with all papers attributed to Swedish Universities (line).



The map shows papers (nodes) published by PROJ_YOUTH_V1. Relations (edges) are based on bibliographic coupling. Most frequent keywords are displayed for groups of related papers. Papers with high field normalized citation score (>3) are marked with a pink border. Edges between publications with high vitality (>1.2) are drawn in pink.

MOST FREQUENT JOURNALS

- J ADOLESCENCE (6)
- DEV PSYCHOL (5)
- J YOUTH ADOLESCENCE (4)
- PERS INDIV DIFFER (3)
- J RES ADOLESCENCE (3)
- J ABNORM CHILD PSYCH (3)
- ADDICTION (3)
- J COMMUNITY PSYCHOL (2)
- INT J BEHAV DEV (2)
- EUR J PERSONALITY (2)
- EUR J DEV PSYCHOL (2)
- SOC NETWORKS (1)

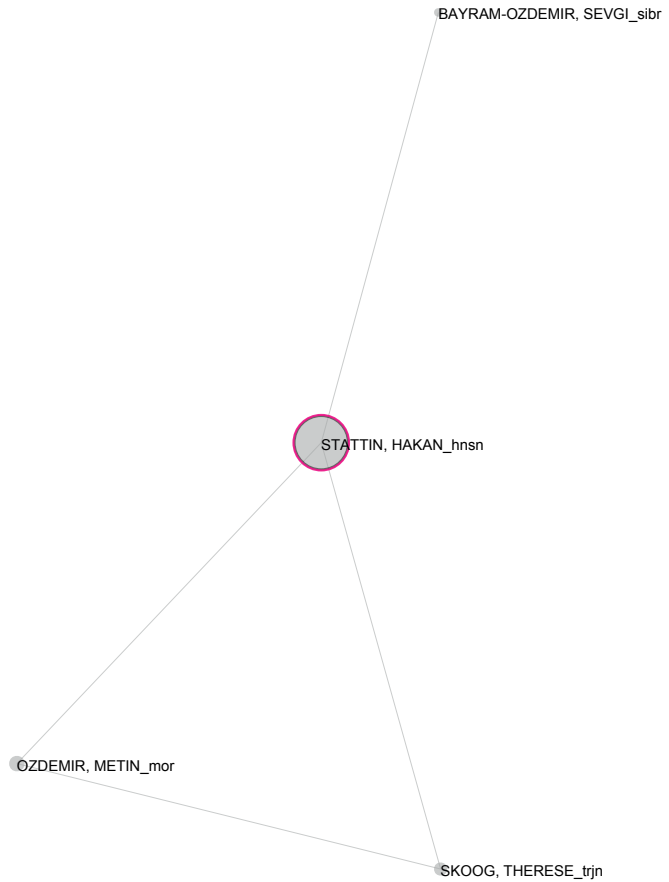
MOST FREQUENT TIMING COLLABORATORS

- OREBRO UNIV (55)
- TURIN UNIV (12)
- RADBOUD UNIV NIJMEGEN (7)
- PADUA UNIV (6)
- UTRECHT UNIV (4)
- BRITISH COLUMBIA UNIV (4)
- NAPLES 2 UNIV (3)
- FLORIDA ATLANTIC UNIV (3)
- CNR (3)
- ABO AKAD UNIV (3)
- VIRGINIA UNIV (2)
- STOCKHOLM UNIV (2)

MOST FREQUENT SUBFIELDS

- PSYCHOLOGY (51)
- PUBLIC, ENVIRONMENTAL & OCCUPATIONAL HEALTH (6)
- SOCIOLOGY (5)
- PSYCHIATRY (5)
- FAMILY STUDIES (5)
- SUBSTANCE ABUSE (4)
- SOCIAL WORK (4)
- SOCIAL SCIENCES - OTHER TOPICS (3)
- PEDIATRICS (2)
- GENETICS & HEREDITY (2)
- UROLOGY & NEPHROLOGY (1)
- SPORT SCIENCES (1)

COLLABORATION NETWORK



Faculty of Medicine
and Health

Faculty of Medicine and Health
Unit of Evaluation: Medical Sciences

Medical Sciences

		WEB OF SCIENCE																	DIVA 2008 - 2014										
		#P20	#P20														PM	TOP	DIVA					DIVA					
		08-	08-	#FRAC	NCS	NJC	NCS	VITA	TOP	TOP	TOP	TOP	TOP	TOP	PNC	AU	IntCO	PM	TOP	DIVA	DIVA	DIVA	DIVA	DIVA	DIVA	DIVA			
AUD	DER	TUS	UNIT	14	12	(08-12)	FAP	j	S	f	LITY	1	5	10	25	50	m	LLm	POINTS	LEVEL	Level1	Level2	Level1	Level2	PP	REF	F		
lzlg	F	ResA	BIOM	6	3	0,8	0,5	0,90	0,49	0,42	0,81	0%	0%	0%	0%	19%	0%	3,9	1,0	0,8	<top50%								
axpn	M	ResA	BIOM	5	3	0,5	0,3	0,80	0,99	0,50	1,00	0%	0%	0%	0%	33%	0%	5,9	1,0	0,6	<top50%								
kfr	M	Rese	BIOM	4	2	0,3	0,2	0,85	0,80	0,69	1,04	0%	0%	0%	0%	65%	0%	7,8	1,7	0,4	<top50%	2	0	100%	0%	0,5	6,2	0,1	
hkf	M	Rese	BIOM	13	6	1,5	1,0	0,77	0,96	0,67	0,97	0%	0%	0%	8%	53%	0%	4,1	1,5	1,8	TOP50%	10	4	67%	33%	4,3	6,2	0,7	
mpt	F	Rese	BIOM	3	3	0,7	0,4	0,59	0,41	0,23	0,90	0%	0%	0%	0%	0%	0%	4,6	1,0	0,6	<top50%	3	0	100%	0%	0,7	6,2	0,1	
idl	M	Post	BIOM	6	1	0,2	0,1	0,00	0,90	0,00	1,00	0%	0%	0%	0%	0%	100%	6,0	1,0	0,1	<top50%	3	0	100%	0%	0,8	6,2	0,1	
john	F	Post	BIOM	5	2	0,4	0,3	0,45	0,80	0,43	1,00	0%	0%	0%	0%	33%	0%	5,3	1,3	0,4	<top50%	5	1	44%	56%	1,8	6,2	0,3	
tbm	M	Prof	BIOM	24	16	3,6	2,5	0,65	0,64	0,54	0,96	0%	3%	3%	10%	27%	12%	4,4	1,0	5,7	TOP25%	20	4	64%	36%	7,5	6,2	1,2	
ddo	M	Prof	BIOM	4	0	0,0	0,0	0,00	0,00	0,00	0,00	0%	0%	0%	0%	0%	0%	0,0	0,0	0,0	<top50%	4	0	100%	0%	0,8	6,2	0,1	
mgd	M	Prof	BIOM	18	12	2,5	1,7	0,60	0,58	0,38	0,93	0%	0%	0%	0%	21%	0%	4,8	1,1	2,5	TOP50%	8	0	100%	0%	3,7	6,2	0,6	
ehf	F	Prof	BIOM	19	10	2,2	1,6	0,42	0,55	0,27	0,98	0%	0%	0%	0%	8%	11%	4,6	1,6	2,1	TOP50%	17	1	90%	10%	3,7	6,2	0,6	
kjn	M	Prof	BIOM	7	6	2,1	1,5	0,35	0,81	0,27	1,20	0%	0%	0%	0%	10%	32%	2,9	1,0	2,0	TOP50%	4	1	70%	30%	2,0	6,2	0,3	
apo	F	Prof	BIOM	19	13	3,5	2,4	0,53	0,93	0,47	0,99	0%	0%	0%	0%	35%	12%	3,7	1,1	4,0	TOP25%	15	1	84%	16%	4,7	6,2	0,8	
kas	M	Prof	BIOM	21	16	2,7	1,8	0,60	1,29	0,72	0,99	0%	3%	3%	16%	38%	6%	5,9	1,7	4,6	TOP25%	23	1	95%	5%	4,3	6,2	0,7	
snwm	M	Prof	BIOM	13	10	2,3	1,5	0,43	0,91	0,31	1,01	0%	0%	0%	0%	19%	9%	4,4	1,3	2,2	TOP50%	12	1	98%	2%	2,7	6,2	0,4	
ket	F	Seni	BIOM	4	2	0,6	0,4	0,45	0,60	0,27	0,81	0%	0%	0%	0%	0%	0%	3,4	1,0	0,5	<top50%	4	0	100%	0%	0,8	6,2	0,1	
garm	F	Seni	BIOM	4	4	0,8	0,6	1,21	0,95	1,11	1,04	0%	0%	0%	0%	38%	100%	0%	4,9	1,0	1,9	TOP50%	3	1	50%	50%	1,2	6,2	0,2
mamf	F	Seni	BIOM	3	3	0,5	0,3	0,65	0,65	1,52	1,24	0%	0%	64%	64%	64%	0%	6,4	1,0	2,7	TOP50%								
mlin	M	Seni	BIOM	6	4	0,7	0,5	0,44	0,83	0,34	0,88	0%	0%	0%	0%	41%	47%	5,8	1,2	0,8	<top50%	4	0	100%	0%	0,9	6,2	0,1	
jcjn	F	Seni	BIOM	2	1	0,1	0,1	0,23	0,66	0,15	1,37	0%	0%	0%	0%	0%	0%	7,0	1,0	0,1	<top50%	5	0	100%	0%	0,9	6,2	0,1	
msja	M	Seni	BIOM	6	2	0,5	0,3	1,36	0,96	1,50	0,92	0%	0%	33%	67%	67%	0%	4,0	1,3	1,6	TOP50%	9	0	100%	0%	1,8	6,2	0,3	
ckn	F	Seni	BIOM	5	4	1,3	0,9	0,97	0,76	0,85	1,04	0%	0%	0%	30%	46%	0%	3,2	1,0	1,9	TOP50%	3	1	88%	12%	1,1	6,2	0,2	
eon	F	Seni	BIOM	4	2	0,4	0,3	0,75	1,35	0,99	1,02	0%	0%	0%	0%	100%	0%	5,1	1,4	0,7	<top50%	2	2	29%	71%	1,7	6,2	0,3	
riva	M	Seni	BIOM	5	5	0,9	0,6	0,41	0,77	0,31	1,01	0%	0%	0%	0%	23%	18%	5,5	1,0	0,9	<top50%	7	0	100%	0%	1,3	6,2	0,2	
ghs	F	Seni	BIOM	12	7	1,1	0,8	1,02	0,57	0,52	1,09	0%	0%	0%	0%	60%	15%	6,2	1,1	1,5	TOP50%	2	0	100%	0%	0,3	6,2	0,1	
rke	M	Seni	BIOM	8	3	0,9	0,8	0,91	1,19	1,05	0,93	0%	0%	0%	27%	91%	0%	3,3	1,0	2,3	TOP50%	6	0	100%	0%	1,5	6,2	0,2	
jje	M	Prof	MED	18	15	2,9	2,0	1,37	0,69	0,98	1,19	3%	12%	16%	16%	33%	12%	5,2	2,5	16,2	TOP10%	16	0	100%	0%	3,1	6,2	0,5	
jnaa	M	Prof	MED	19	15	3,0	2,1	1,40	1,15	1,51	1,01	0%	13%	20%	28%	65%	0%	5,0	1,7	11,6	TOP10%	15	2	88%	12%	3,4	6,2	0,6	
oan	M	Prof	MED	43	21	2,1	1,4	1,36	1,41	1,47	1,11	0%	10%	18%	45%	69%	0%	10,2	2,1	7,9	TOP25%	18	17	23%	77%	8,4	6,2	1,4	
pet	M	Prof	MED	12	12	3,4	2,3	0,56	0,66	0,44	1,09	0%	0%	0%	9%	24%	32%	3,5	1,1	3,6	TOP25%	11	0	100%	0%	3,1	6,2	0,5	
iem	M	Prof	MED	14	9	3,0	2,0	1,38	1,03	1,58	1,02	0%	14%	22%	38%	69%	0%	3,0	1,0	12,0	TOP10%	40	4	90%	10%	22,5	6,2	3,7	
oft	M	Prof	MED	42	20	3,1	2,1	0,93	1,34	1,90	1,13	5%	7%	21%	33%	44%	18%	6,5	2,0	23,1	TOP5%	2	1	52%	48%	0,8	6,2	0,1	
mskn	M	Prof	MED	17	12	2,7	1,8	0,68	0,69	1,50	1,07	0%	0%	1%	9%	39%	25%	4,5	1,1	3,3	TOP50%	11	1	94%	6%	2,3	6,2	0,4	
smv	M	Prof	MED	83	58	12,5	8,6	0,98	1,27	1,12	1,04	0%	2%	11%	41%	66%	5%	4,6	2,0	35,2	TOP5%	62	27	42%	58%	29,0	6,2	4,7	
Wao	M	Prof	MED	17	15	1,7	1,1	1,46	0,89	1,33	1,05	0%	10%	19%	35%	72%	0%	9,0	1,4	6,2	TOP25%								
scd	M	Asso	MED	15	11	3,0	2,1	2,21	0,93	1,93	0,95	7%	18%	23%	53%	81%	0%	3,6	1,2	32,6	TOP5%	17	0	100%	0%	5,1	6,2	0,8	
adn	M	Asso	MED	1	1	0,1	0,1	0,05	1,37	0,07	0,91	0%	0%	0%	0%	0%	0%	10,0	1,0	0,1	<top50%								
lgn	M	Asso	MED	5	5	1,1	0,8	2,67	1,05	3,48	0,94	23%	45%	45%	45%	62%	0%	4,5	1,0	30,5	TOP5%	3	0	100%	0%	0,7	6,2	0,1	
awf	F	Asso	MED	15	11	2,2	1,5	1,30	0,84	0,86	1,17	0%	0%	6%	23%	66%	8%	5,0	1,8	4,2	TOP25%	12	6	35%	65%	6,3	6,2	1,0	
hgz	M	Asso	MED	2	0	0,0	0,0	0,00	0,00	0,00	0,00	0%	0%	0%	0%	0%	0%	0,0	0,0	0,0	<top50%	2	1	34%	66%	0,8	6,2	0,1	
ikg	F	ResA	MED	3	0	0,0	0,0	0,00	0,00	0,00	0,00	0%	0%	0%	0%	0%	0%	0,0	0,0	0,0	<top50%	4	2	52%	48%	2,2	6,2	0,4	
isz	F	ResA	MED	7	5	0,8	0,5	0,68	1,25	0,87	1,20	0%	3%	12%	26%	57%	0%	6,5	1,9	1,8	TOP50%	3	4	26%	74%	2,6	6,2	0,4	
nwl	F	ResA	MED	11	8	1,1	0,8	2,98	1,41	3,41	1,05	24%	34%	48%	71%	86%	0%	7,6	1,1	29,9	TOP5%								
hei	F	Rese	MED	1	1	0,3	0,2	0,57	1,10	0,62	1,04	0%	0%	0%	0%	58%	0%	3,0	1,0	0,3	<top50%	7	1	68%	32%	3,1	6,2	0,5	
grar	M	Prof	MED	7	7	2,8	1,9	1,12	0,56	0,62	0,82	0%	0%	0%	0%	50%	0%	2,5	1,0	3,4	TOP25%	24	0	100%	0%	17,0	6,2	2,8	
tran	M	Prof	MED	5	5	1,2	0,8	0,14	1,12	0,24	1,13	0%	0%	0%	3%	30%	70%	4,3	1,0	1,3	TOP50%	1	3	11%	89%	2,9	6,2	0,5	
rmb	M	Prof	MED	43	38	5,4	3,7	1,63	1,01	1,61	0,97	5%	15%	19%	38%	55%	0%	7,0	1,7	45,4	TOP5%	38	8	63%	37%	10,1	6,2	1,6	
mslg	M	Prof	MED	16	8	2,3	1,5	1,11	1,21	1,31	1,06	0%	0%	0%	54%	81%	0%	3,5	1,0	5,2	TOP25%	11	2	68%	32%	4,7	6,2	0,8	
olt	M	Prof	MED	41	27	6,7	4,5	1,88	1,13	2,47	1,13	6%	34%	39%	60%	74%	15%	4,1	2,0	83,0	TOP1%	46	9	64%	36%	25,2	6,2	4,1	
cmr	M	Prof	MED	31	14	2,7	1,8	1,32	0,81	1,05	0,94	0%	0%	5%	45%	57%	17%	5,2	1,6	5,6	TOP25%	41	2	87%	13%	9,4	6,2	1,5	
east	F	Prof	MED	13	8	1,1	0,7	1,36	1,16	1,24	1,01	0%	0%	0%	0%	50%	72%	0%	7,3	1,4	2,5	TOP50%	13	3	59%	41%	3,2	6,2	0,5
jsn	M	Prof	MED	12	11	2,5	1,7	0,90	0,83	0,80	1,05	0%	0%	0%	20%	59%	0%	4,5	1,4	4,0	TOP25%	13	0	100%	0%	2,9	6,2	0,5	
bost	M	Prof	MED	47	26	6,6	4,5	1,12	0,82	0,96	1,00	0%	0%	10%	20%	57%	0%	4,0	1,1	13,9	TOP10%	48	6	75%	25%	15,8	6,2	2,6	
uftt	M	Prof	MED	12	11	1,7	1,2	1,06	0,92	1,26	0,96	7%	16%	16%	19%	38%	0%	6,5	1,1	15,6	TOP10%	10	3	71%	29%	2,6	6,2	0,4	
kafif	F	Seni	MED	53	38	4,7	3,2	0,74	2,16	1,22	1,04	0%	7%	14%	36%	51%	21%	8,1	2,6	14,7	TOP10%	14	12</						

AUID	GEN DER	STA TUS	UNIT	#P20		#FRAC	NCS j	NJC S	NCS f	VITA LITY	TOP 1	TOP 5	TOP 10	TOP 25	TOP 50	PNC	AU m	IntCO LLm	PM POINTS	TOP LEVEL	DIVA Level1	DIVA Level2	DIVA %Level1	DIVA %Level2	DIVA PP	DIVA REF	DIVA PP/REF	DIVA F
				14	12																							
adg	F	Seni	MED	15	10	1.8	1.2	1.01	1.16	1.02	1.17	0%	0%	0%	34%	73%	0%	5.5	1.2	3.7	TOP25%	13	4	35%	65%	5.0	6.2	0.8
knfn	F	Seni	MED	5	3	0.6	0.4	0.71	0.58	0.38	0.92	0%	0%	0%	0%	0%	0%	4.9	1.0	0.5	<top50%	5	0	100%	0%	0.9	6.2	0.2
Hah	M	Seni	MED	3	2	0.4	0.3	0.80	0.67	0.63	0.90	0%	0%	0%	88%	0%	5.0	1.0	0.6	<top50%								
ovhn	M	Seni	MED	9	4	0.8	0.5	0.42	0.60	0.27	1.11	0%	0%	0%	22%	22%	5.3	2.4	0.8	<top50%	1	0	100%	0%	0.3	6.2	0.0	
jnka	M	Seni	MED	1	0	0.0	0.0	0.00	0.00	0.00	0.00	0%	0%	0%	0%	0%	0.0	0.0	0.0	<top50%	1	1	57%	43%	0.3	6.2	0.0	
pki	M	Seni	MED	3	2	0.3	0.2	0.85	0.77	0.46	0.97	0%	0%	0%	50%	0%	7.0	2.0	0.4	<top50%	2	0	100%	0%	0.3	6.2	0.0	
Lun	M	Seni	MED	6	5	1.0	0.7	1.77	1.23	2.26	1.13	0%	34%	51%	51%	66%	0%	5.1	1.0	7.6	TOP25%							
bonn	M	Seni	MED					0.0																				
jnsh	F	Seni	MED	6	4	0.8	0.6	1.09	0.62	0.70	1.06	0%	0%	0%	25%	75%	0%	5.0	1.5	1.6	TOP50%	5	0	100%	0%	0.9	6.2	0.1
Vka	F	Seni	MED	7	2	0.3	0.2	2.19	1.82	4.05	1.12	0%	76%	76%	76%	100%	0%	6.1	2.0	4.4	TOP25%							

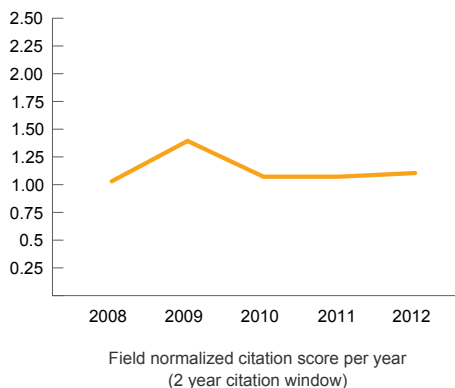
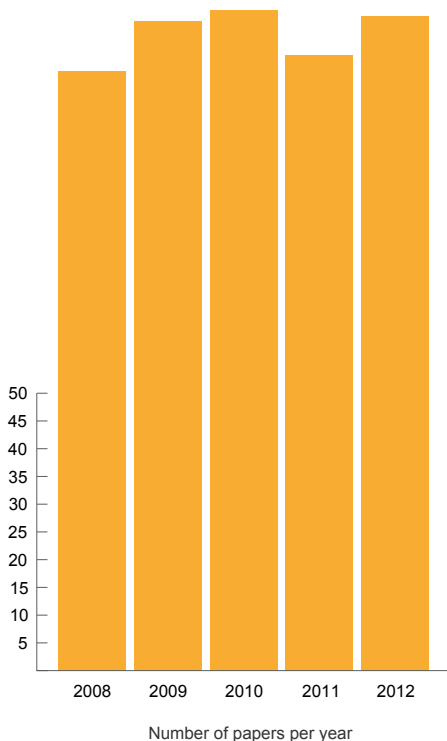
PRODUCTION
93,7
PERSONNEL
84
PRODUCTIVITY
1,12

ABBR:

AUID See Annex F
SUBUNIT BIOM=Biomedicine; MED=Medicine
STATUS Prof=Professor; Seni=Senior Lecturer; Asso=Associate Prof; ResA=Research Assoc; Rese=Researcher; Post=Postdoc

Faculty of Medicine and Health
 Unit of Evaluation: Medical Sciences
BIBLIOMETRIC INDICATORS

NUMBER OF PAPERS (P)	573
Number of papers (articles, letters and reviews) published by UoA "proj_UOA_medical_v2" during 2008-2012.	
NUMBER OF FRACTIONALIZED PAPERS (Frac P)	129.5
Sum of author fractionalized papers.	
CITATIONS PER PAPER (CPP)	10.9
Number of citations per paper.	
JOURNAL NORMALIZED CITATION SCORE (NCSj)	1.09
CPP normalized in relation to the UoA "proj_UOA_medical_v2" journal set (average=1.00).	
NORMALIZED JOURNAL CITATION SCORE (NJCS)	1.03
The impact of the journal set normalized in relation to its sub-fields (average=1.00).	
FIELD NORMALIZED CITATION SCORE (NCSf)	1.16
CPP normalized in relation to the UoA "proj_UOA_medical_v2" sub-field set (average=1.00).	
SUM OF FIELD NORMALIZED CITATION SCORE (Sum NCSf)	150.7
NCSf times Frac P.	
TOP 5 % (TOP5%)	7.60
Percentage of papers above the 95th citation percentile.	
VITALITY	1.04
Mean reference age normalized in relation to the sub-field set (average=1, higher=younger).	



Faculty of Medicine and Health
 Unit of Evaluation: Medical Sciences
BIBLIOMETRIC INDICATORS

PERCENTAGE NOT CITED PAPERS (PNC) **6**

Percentage of not cited papers during the period.

HIRSCH INDEX (h-index) **43**

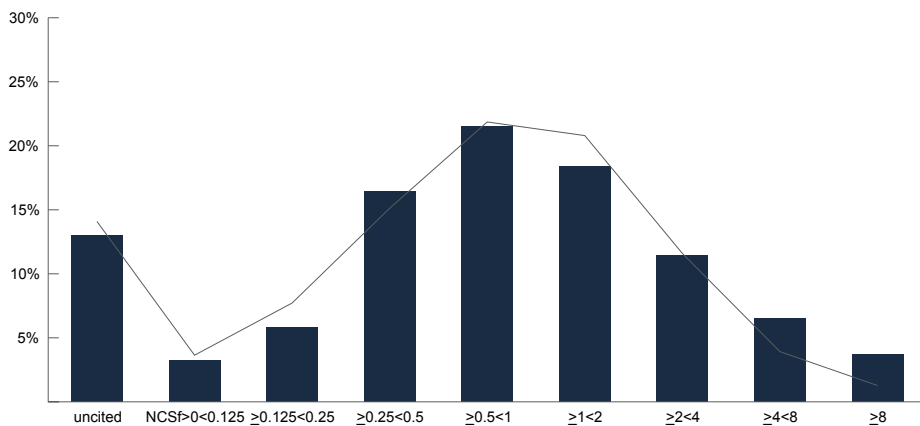
The h number papers that have at least h citations each.

AUTHOR MEAN (AUm) **7.3**

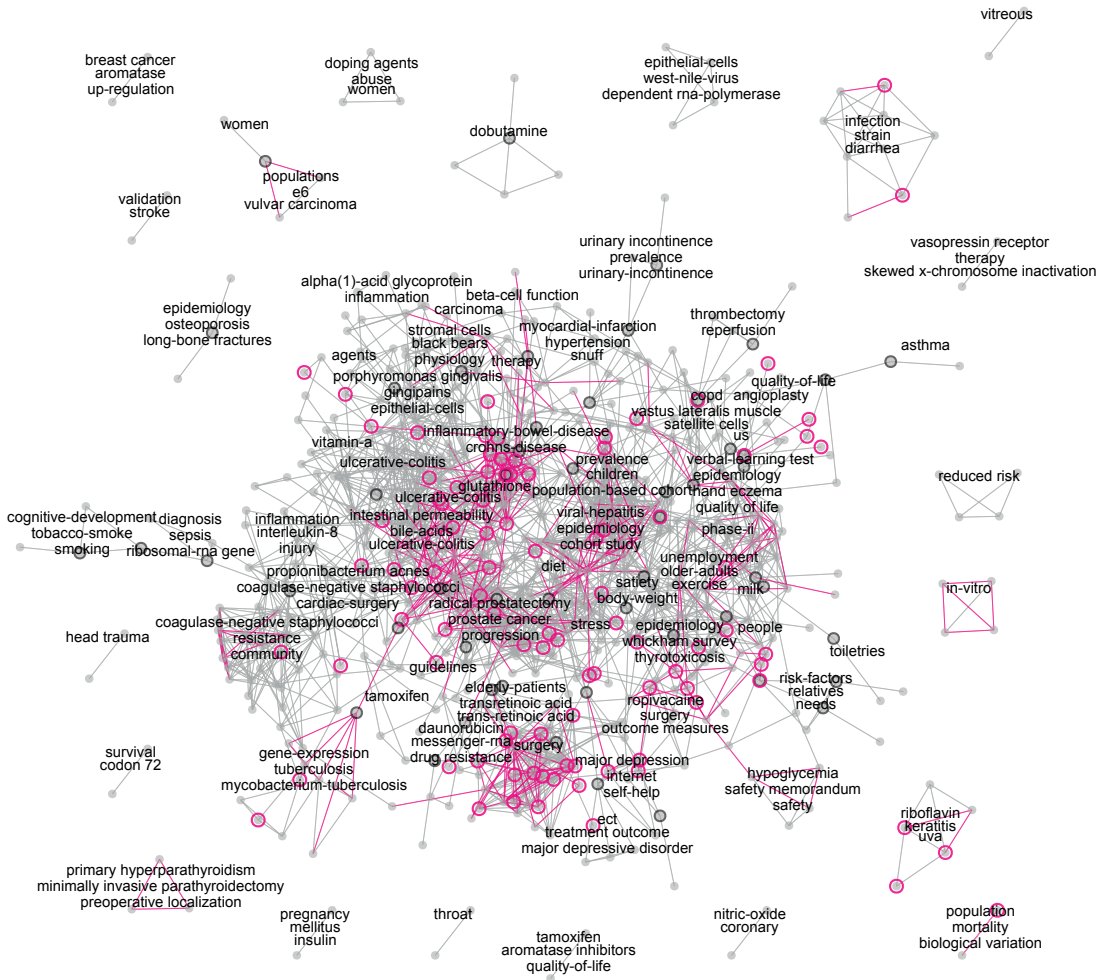
Mean number of authors per paper.

INTERNATIONAL COLLABORATION MEAN (IntCOLLm) **1.9**

Mean number of countries per paper.



Citation profile: The distribution of field normalized citation score for proj_UOA_medical_v2 (bars) compared with all papers attributed to Swedish Universities (line).



The map shows papers (nodes) published by proj_UOA_medical_v2. Relations (edges) are based on bibliographic coupling. Most frequent keywords are displayed for groups of related papers. Papers with high field normalized citation score (>3) are marked with a pink border. Edges between publications with high vitality (>1.2) are drawn in pink.

MOST FREQUENT JOURNALS

- PLOS ONE (22)
- CLIN NUTR (18)
- INFLAMM BOWEL DIS (15)
- APMIS (13)
- EUR J CLIN MICROBIOL (11)
- ALIMENT PHARM THER (11)
- ACTA PAEDIATR (11)
- AM J EPIDEMIOL (8)
- NEW ENGL J MED (7)
- EUR J ENDOCRINOL (7)
- CLIN MICROBIOL INFEC (7)
- CANCER EPIDEM BIOMAR (7)

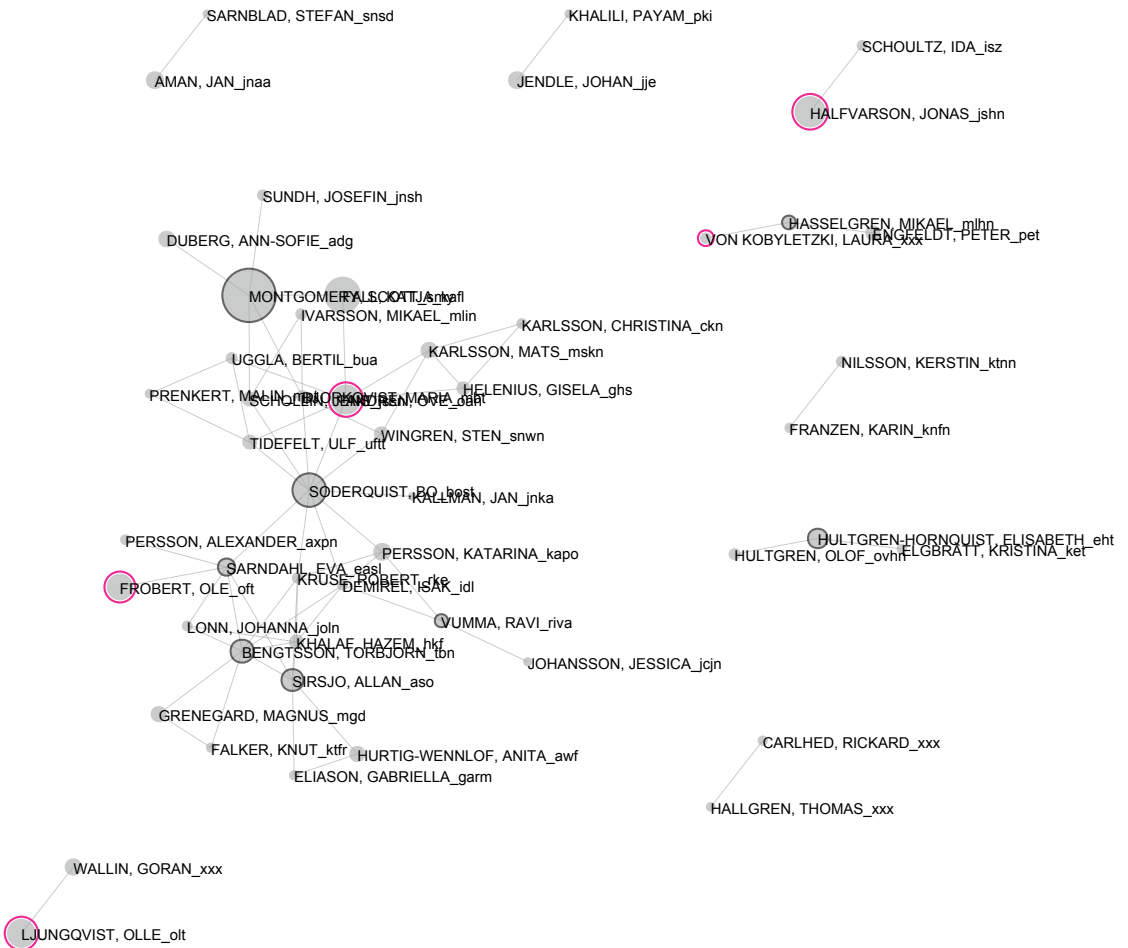
MOST FREQUENT COLLABORATORS

- OREBRO UNIV HOSP (532)
- OREBRO UNIV (387)
- KAROLINSKA INST (334)
- LINKOPING UNIV (150)
- HARVARD UNIV (125)
- KAROLINSKA UNIV HOSP (123)
- UPPSALA UNIV (106)
- HOSP UNIV (54)
- MAASTRICHT UNIV (44)
- UPPSALA HOSP UNIV (40)
- GOTHENBURG UNIV (40)
- LINKOPING UNIV HOSP (39)

MOST FREQUENT SUBFIELDS

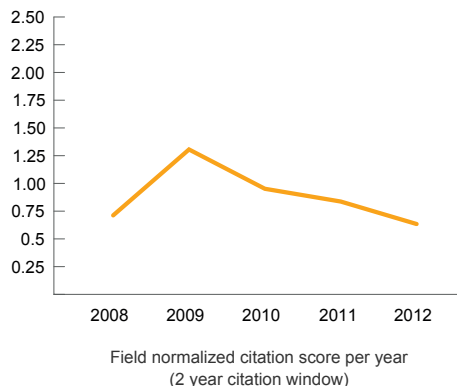
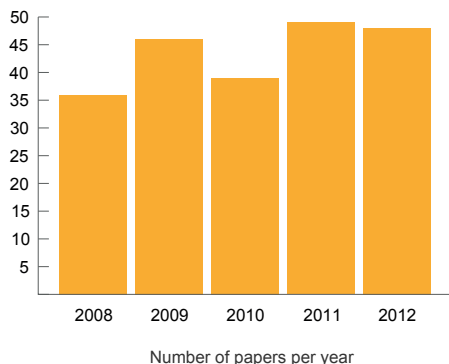
- ONCOLOGY (72)
- GASTROENTEROLOGY & HEPATOLOGY (70)
- MICROBIOLOGY (65)
- NUTRITION & DIETETICS (58)
- IMMUNOLOGY (56)
- INFECTIOUS DISEASES (50)
- ENDOCRINOLOGY & METABOLISM (50)
- CARDIOVASCULAR SYSTEM & CARDIOLOGY (39)
- PUBLIC, ENVIRONMENTAL & OCCUPATIONAL HEALTH (36)
- GENERAL & INTERNAL MEDICINE (33)
- PEDIATRICS (30)
- CELL BIOLOGY (28)

Faculty of Medicine and Health
 Unit of Evaluation: Medical Sciences
COLLABORATION NETWORK

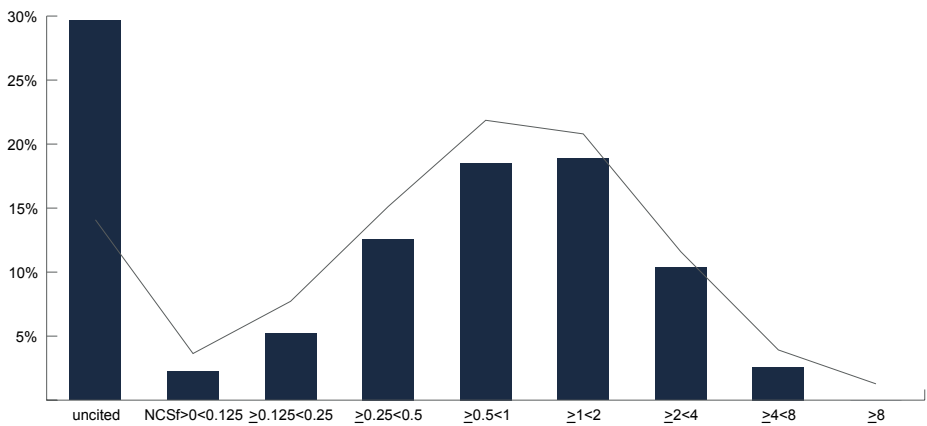


Faculty of Medicine and Health
 Unit of Evaluation: Health Sciences
BIBLIOMETRIC INDICATORS

NUMBER OF PAPERS (P)	218
Number of papers (articles, letters and reviews) published by UoA "proj_UOA_health_sci_v2" during 2008-2012.	
NUMBER OF FRACTIONALIZED PAPERS (Frac P)	80.6
Sum of author fractionalized papers.	
CITATIONS PER PAPER (CPP)	5.4
Number of citations per paper.	
JOURNAL NORMALIZED CITATION SCORE (NCSj)	1.02
CPP normalized in relation to the UoA "proj_UOA_health_sci_v2" journal set (average=1.00).	
NORMALIZED JOURNAL CITATION SCORE (NJCS)	0.82
The impact of the journal set normalized in relation to its sub-fields (average=1.00).	
FIELD NORMALIZED CITATION SCORE (NCSf)	0.85
CPP normalized in relation to the UoA "proj_UOA_health_sci_v2" sub-field set (average=1.00).	
SUM OF FIELD NORMALIZED CITATION SCORE (Sum NCSf)	68.4
NCSf times Frac P.	
TOP 5 % (TOP5%)	2.74
Percentage of papers above the 95th citation percentile.	
VITALITY	1.03
Mean reference age normalized in relation to the sub-field set (average=1, higher=younger).	

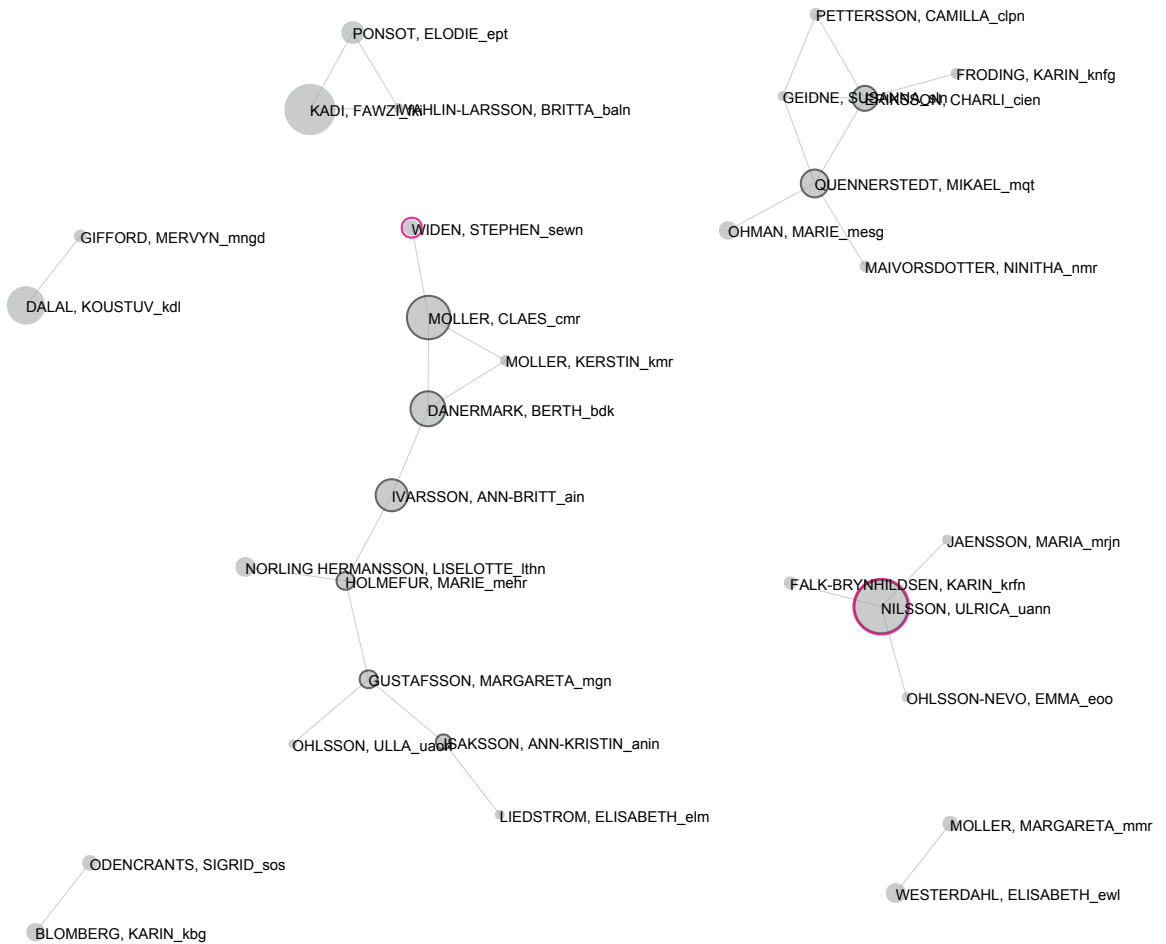


PERCENTAGE NOT CITED PAPERS (PNC)	20
Percentage of not cited papers during the period.	
HIRSCH INDEX (h-index)	17
The h number papers that have at least h citations each.	
AUTHOR MEAN (A_{um})	4.2
Mean number of authors per paper.	
INTERNATIONAL COLLABORATION MEAN (IntCOLL_m)	1.4
Mean number of countries per paper.	



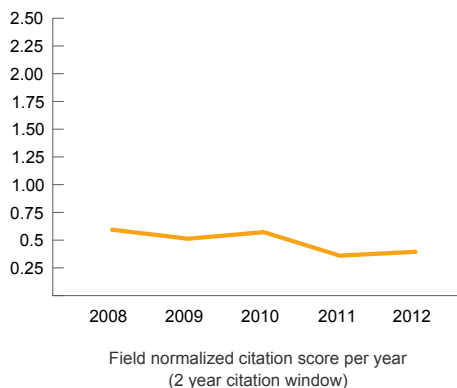
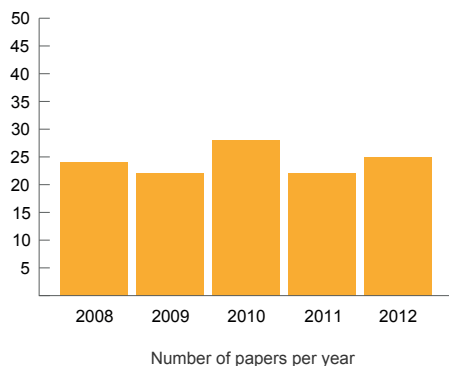
Citation profile: The distribution of field normalized citation score for proj_UOA_health_sci_v2 (bars) compared with all papers attributed to Swedish Universities (line).

Faculty of Medicine and Health
 Unit of Evaluation: Health Sciences
COLLABORATION NETWORK



BIBLIOMETRIC INDICATORS

NUMBER OF PAPERS (P)	121
Number of papers (articles, letters and reviews) published by UoA "PROJ_SUB-UNI_BIOMEDICINE_V1" during 2008-2012.	
NUMBER OF FRACTIONALIZED PAPERS (Frac P)	30.8
Sum of author fractionalized papers.	
CITATIONS PER PAPER (CPP)	5.7
Number of citations per paper.	
JOURNAL NORMALIZED CITATION SCORE (NCSj)	0.66
CPP normalized in relation to the UoA "PROJ_SUB-UNI_BIOMEDICINE_V1" journal set (average=1.00).	
NORMALIZED JOURNAL CITATION SCORE (NJCS)	0.82
The impact of the journal set normalized in relation to its sub-fields (average=1.00).	
FIELD NORMALIZED CITATION SCORE (NCSf)	0.53
CPP normalized in relation to the UoA "PROJ_SUB-UNI_BIOMEDICINE_V1" sub-field set (average=1.00).	
SUM OF FIELD NORMALIZED CITATION SCORE (Sum NCSf)	16.4
NCSf times Frac P.	
TOP 5 % (TOP5%)	0.56
Percentage of papers above the 95th citation percentile.	
VITALITY	1.0
Mean reference age normalized in relation to the sub-field set (average=1, higher=younger).	



BIBLIOMETRIC INDICATORS

PERCENTAGE NOT CITED PAPERS (PNC) **1e+001**

Percentage of not cited papers during the period.

HIRSCH INDEX (h-index) **13**

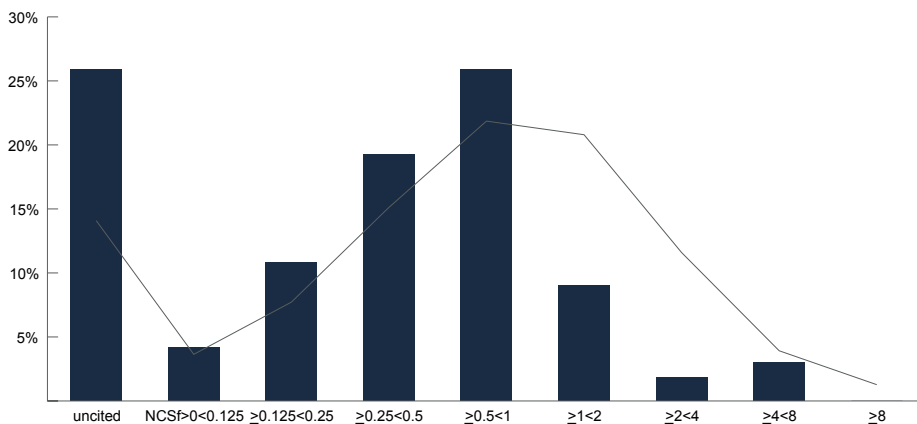
The h number papers that have at least h citations each.

AUTHOR MEAN (A_{Um}) **5.5**

Mean number of authors per paper.

INTERNATIONAL COLLABORATION MEAN (IntCOLLm) **1.3**

Mean number of countries per paper.



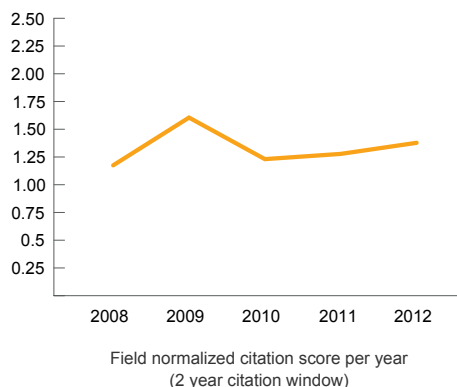
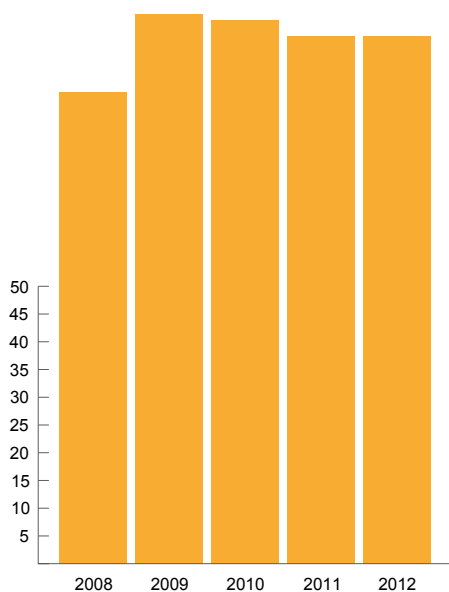
Citation profile: The distribution of field normalized citation score for PROJ_SUB-UNI_BIOMEDICINE_V1 (bars) compared with all papers attributed to Swedish Universities (line).

Faculty of Medicine and Health; Medical Sciences
Subunit: Biomedicine
COLLABORATION NETWORK



BIBLIOMETRIC INDICATORS

NUMBER OF PAPERS (P)	472
Number of papers (articles, letters and reviews) published by UoA "PROJ_SUB-UNI_MEDICINE_V1" during 2008-2012.	
NUMBER OF FRACTIONALIZED PAPERS (Frac P)	98.6
Sum of author fractionalized papers.	
CITATIONS PER PAPER (CPP)	12.5
Number of citations per paper.	
JOURNAL NORMALIZED CITATION SCORE (NCSj)	1.23
CPP normalized in relation to the UoA "PROJ_SUB-UNI_MEDICINE_V1" journal set (average=1.00).	
NORMALIZED JOURNAL CITATION SCORE (NJCS)	1.09
The impact of the journal set normalized in relation to its sub-fields (average=1.00).	
FIELD NORMALIZED CITATION SCORE (NCSf)	1.36
CPP normalized in relation to the UoA "PROJ_SUB-UNI_MEDICINE_V1" sub-field set (average=1.00).	
SUM OF FIELD NORMALIZED CITATION SCORE (Sum NCSf)	134.2
NCSf times Frac P.	
TOP 5 % (TOP5%)	9.80
Percentage of papers above the 95th citation percentile.	
VITALITY	1.05
Mean reference age normalized in relation to the sub-field set (average=1, higher=younger).	



BIBLIOMETRIC INDICATORS

PERCENTAGE NOT CITED PAPERS (PNC) **6**

Percentage of not cited papers during the period.

HIRSCH INDEX (h-index) **42**

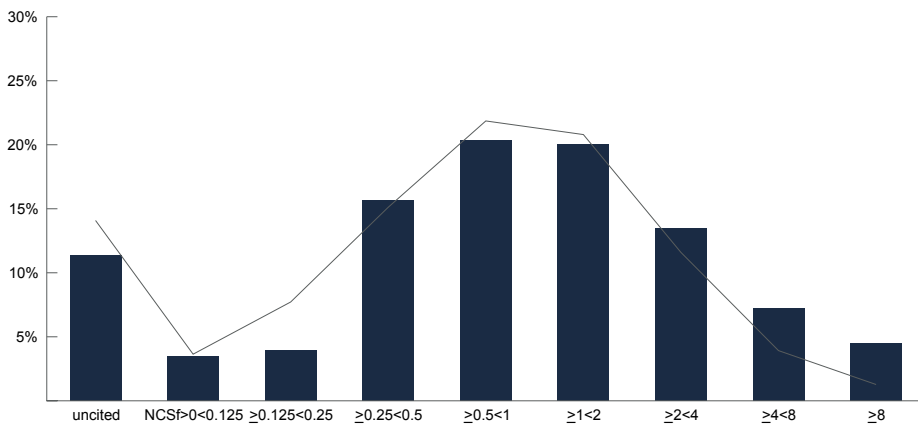
The h number papers that have at least h citations each.

AUTHOR MEAN (A_{um}) **7.7**

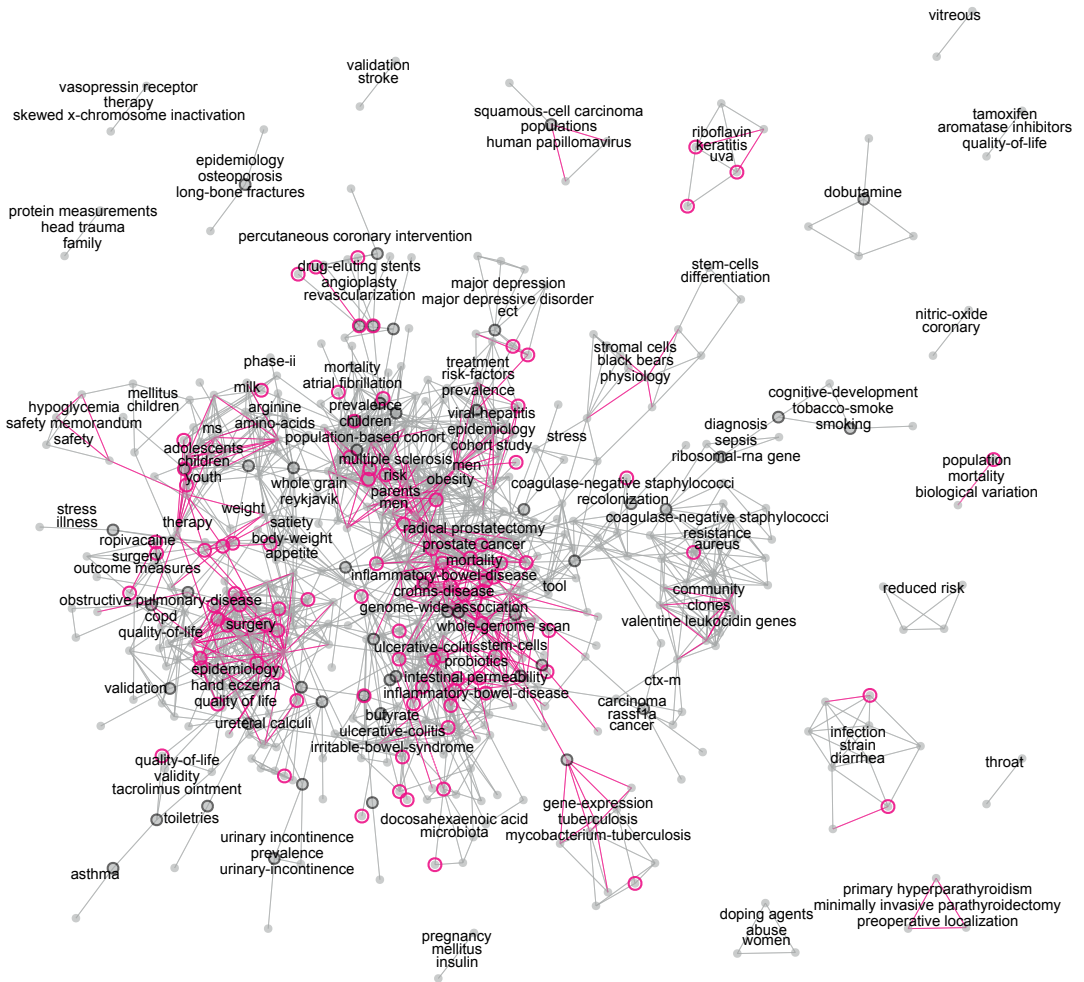
Mean number of authors per paper.

INTERNATIONAL COLLABORATION MEAN (IntCOLLm) **2.0**

Mean number of countries per paper.



Citation profile: The distribution of field normalized citation score for PROJ_SUB-UNI_MEDICINE_V1 (bars) compared with all papers attributed to Swedish Universities (line).



The map shows papers (nodes) published by PROJ_SUB-UNI_MEDICINE_V1. Relations (edges) are based on bibliographic coupling. Most frequent keywords are displayed for groups of related papers. Papers with high field normalized citation score (>3) are marked with a pink border. Edges between publications with high vitality (>1.2) are drawn in pink.

MOST FREQUENT JOURNALS

- CLIN NUTR (18)
- PLOS ONE (16)
- INFLAMM BOWEL DIS (13)
- APMIS (12)
- ALIMENT PHARM THER (11)
- ACTA PAEDIATR (11)
- EUR J CLIN MICROBIOL (10)
- AM J EPIDEMIOL (8)
- NEW ENGL J MED (7)
- EUR J ENDOCRINOL (7)
- CLIN MICROBIOL INFECTION (7)
- CANCER EPIDEM BIOMAR (7)

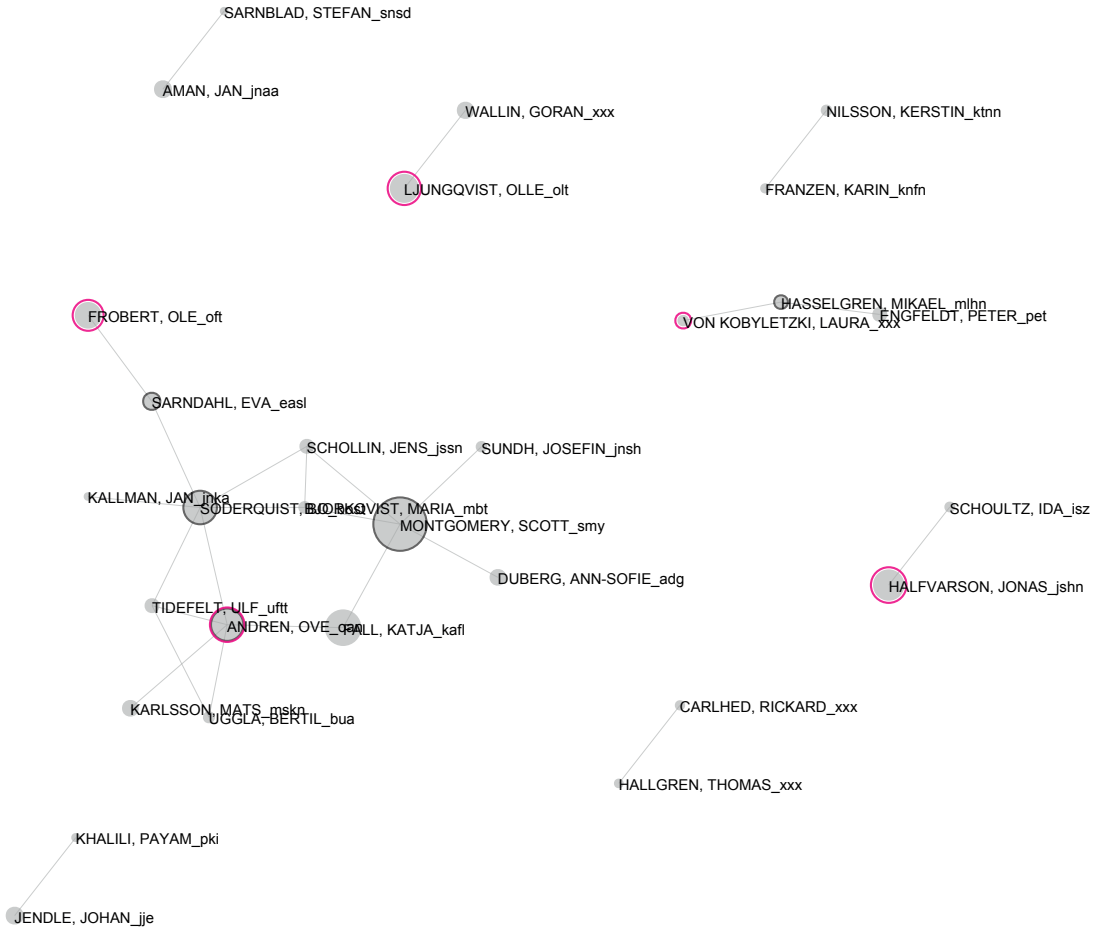
MOST FREQUENT COLLABORATORS

- OREBRO UNIV HOSP (518)
- KAROLINSKA INST (319)
- OREBRO UNIV (273)
- HARVARD UNIV (119)
- KAROLINSKA UNIV HOSP (113)
- UPPSALA UNIV (91)
- LINKOPING UNIV (82)
- HOSP UNIV (50)
- MAASTRICHT UNIV (44)
- UPPSALA HOSP UNIV (36)
- LONDON IMPERIAL COLL SCI TECHNOL & MED (35)
- BRIGHAM & WOMENS HOSP (35)

MOST FREQUENT SUBFIELDS

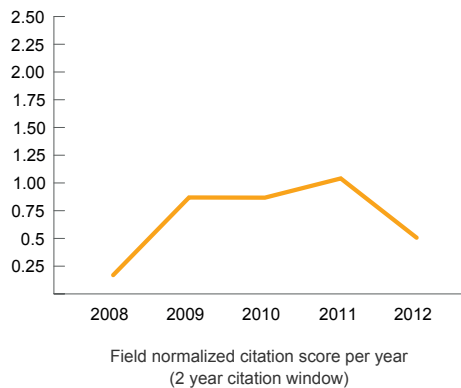
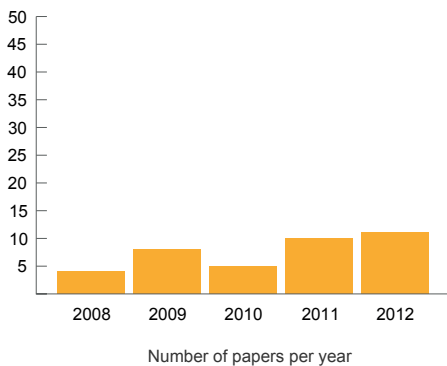
- GASTROENTEROLOGY & HEPATOLOGY (66)
- ONCOLOGY (62)
- NUTRITION & DIETETICS (57)
- MICROBIOLOGY (57)
- ENDOCRINOLOGY & METABOLISM (49)
- INFECTIOUS DISEASES (46)
- PUBLIC, ENVIRONMENTAL & OCCUPATIONAL HEALTH (33)
- IMMUNOLOGY (33)
- GENERAL & INTERNAL MEDICINE (32)
- PEDIATRICS (30)
- IMMUNOLOGY (28)
- PHARMACOLOGY & PHARMACY (22)

COLLABORATION NETWORK



BIBLIOMETRIC INDICATORS

NUMBER OF PAPERS (P)	38
Number of papers (articles, letters and reviews) published by UoA "PROJ_SIDR_V1" during 2008-2012.	
NUMBER OF FRACTIONALIZED PAPERS (Frac P)	13.3
Sum of author fractionalized papers.	
CITATIONS PER PAPER (CPP)	2.8
Number of citations per paper.	
JOURNAL NORMALIZED CITATION SCORE (NCSj)	0.85
CPP normalized in relation to the UoA "PROJ_SIDR_V1" journal set (average=1.00).	
NORMALIZED JOURNAL CITATION SCORE (NJCS)	0.89
The impact of the journal set normalized in relation to its sub-fields (average=1.00).	
FIELD NORMALIZED CITATION SCORE (NCSf)	0.72
CPP normalized in relation to the UoA "PROJ_SIDR_V1" sub-field set (average=1.00).	
SUM OF FIELD NORMALIZED CITATION SCORE (Sum NCSf)	9.6
NCSf times Frac P.	
TOP 5 % (TOP5%)	0.0
Percentage of papers above the 95th citation percentile.	
VITALITY	1.00
Mean reference age normalized in relation to the sub-field set (average=1, higher=younger).	



BIBLIOMETRIC INDICATORS

PERCENTAGE NOT CITED PAPERS (PNC) **26**

Percentage of not cited papers during the period.

HIRSCH INDEX (h-index) **6**

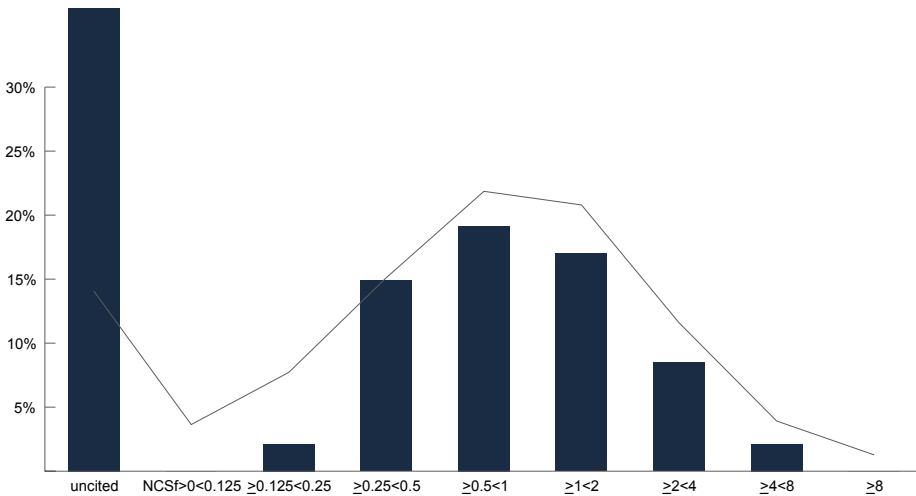
The h number papers that have at least h citations each.

AUTHOR MEAN (A_{um}) **4.6**

Mean number of authors per paper.

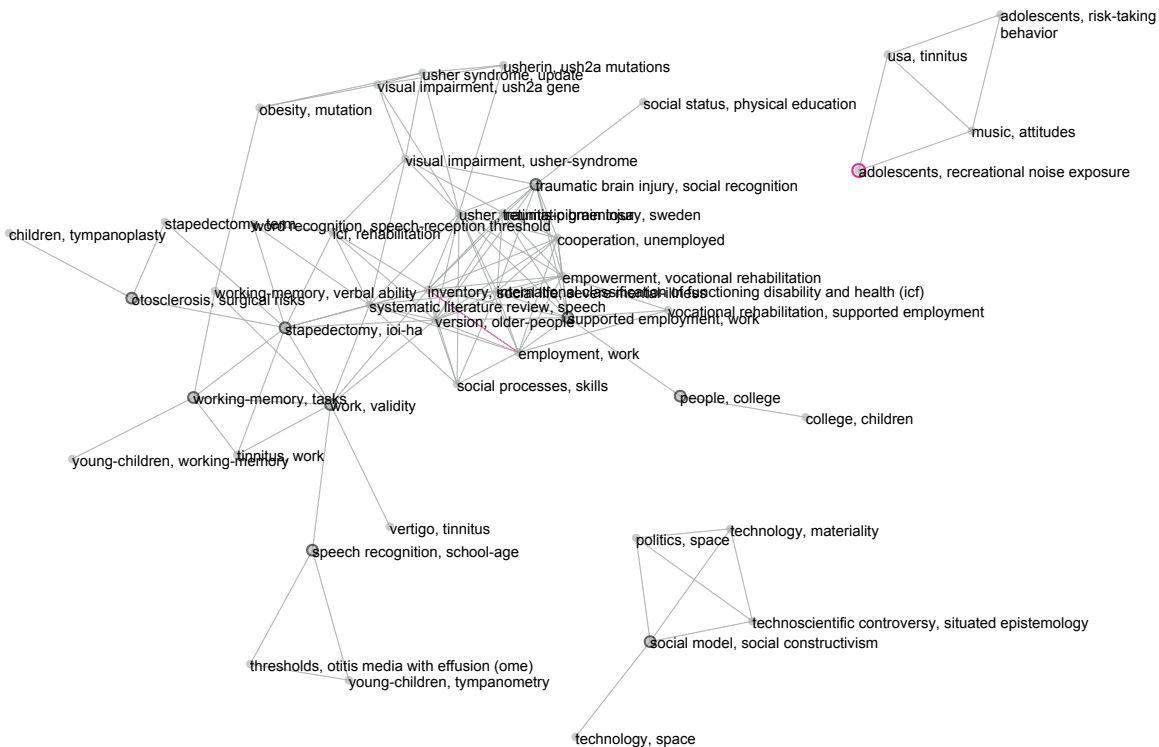
INTERNATIONAL COLLABORATION MEAN (IntCOLLm) **1.5**

Mean number of countries per paper.



Citation profile: The distribution of field normalized citation score for PROJ_SIDR_V1 (bars) compared with all papers attributed to Swedish Universities (line).

Faculty of Medicine and Health; Health Sciences
Subunit: Disability Science (SIDR)
PUBLICATION PROFILE



The map shows papers (nodes) published by PROJ_SIDR_V1.
 Relations (edges) are based on bibliographic coupling.
 Most frequent keywords are displayed for groups of related papers.
 Papers with high field normalized citation score (>3) are marked with a pink border.
 Edges between publications with high vitality (>1.2) are drawn in pink.

MOST FREQUENT JOURNALS

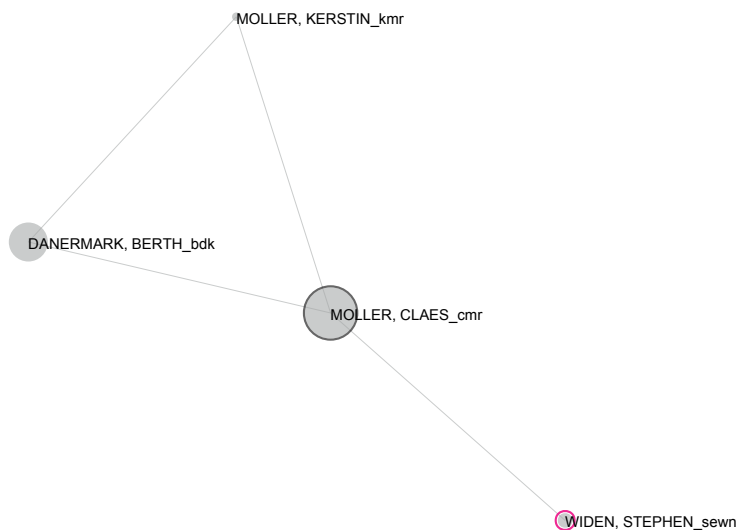
- INT J AUDIOL (11)
- NOISE HEALTH (4)
- INT J PEDIATR OTORHI (4)
- ACTA OTO-LARYNGOL (4)
- DISABIL SOC (3)
- WORK (2)
- SOC WORK HEALTH CARE (2)
- SCI TECHNOL HUM VAL (2)
- SCAND J OCCUP THER (2)
- SCI CULT-UK (1)
- OTOL NEUROTOL (1)
- OPHTHALMIC GENET (1)

MOST FREQUENT COLLABORATORS

- ÖREBRO UNIV (42)
- LINKÖPING UNIV (14)
- ÖREBRO UNIV HOSP (10)
- KAROLINSKA INST (9)
- GÖTHENBURG UNIV (9)
- KAROLINSKA UNIV HOSP (8)
- HOSP UNIV (6)
- HOSP ÖREBRO UNIV (5)
- UPPSALA HOSP UNIV (4)
- SAHLGRENS UNIV HOSP (4)
- IOWA UNIV (3)
- COPENHAGEN UNIV (3)

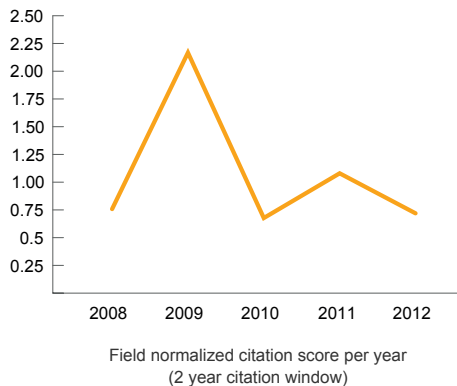
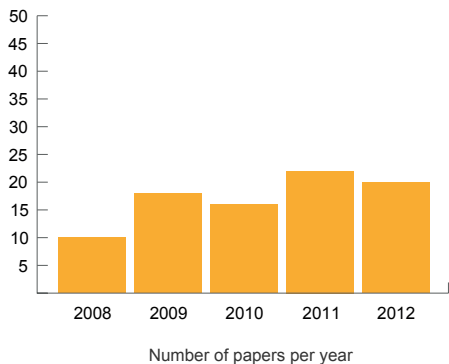
MOST FREQUENT SUBFIELDS

- OTORHINOLARYNGOLOGY (23)
- AUDIOLOGY & SPEECH-LANGUAGE PATHOLOGY (16)
- REHABILITATION (9)
- PUBLIC, ENVIRONMENTAL & OCCUPATIONAL HEALTH (7)
- PEDIATRICS (4)
- SOCIAL SCIENCES - OTHER TOPICS (3)
- OPHTHALMOLOGY (3)
- GENETICS & HEREDITY (3)
- SOCIAL WORK (2)
- SOCIAL ISSUES (2)
- EDUCATION & EDUCATIONAL RESEARCH (2)
- RESEARCH & EXPERIMENTAL MEDICINE (1)



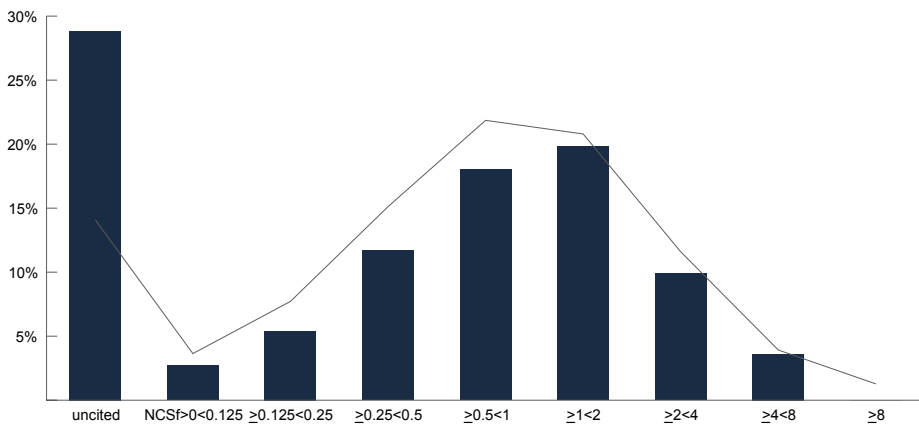
BIBLIOMETRIC INDICATORS

NUMBER OF PAPERS (P)	86
Number of papers (articles, letters and reviews) published by UoA "PROJ_NURSING_SCI_V1" during 2008-2012.	
NUMBER OF FRACTIONALIZED PAPERS (Frac P)	29.4
Sum of author fractionalized papers.	
CITATIONS PER PAPER (CPP)	5.2
Number of citations per paper.	
JOURNAL NORMALIZED CITATION SCORE (NCSj)	1.11
CPP normalized in relation to the UoA "PROJ_NURSING_SCI_V1" journal set (average=1.00).	
NORMALIZED JOURNAL CITATION SCORE (NJCS)	0.82
The impact of the journal set normalized in relation to its sub-fields (average=1.00).	
FIELD NORMALIZED CITATION SCORE (NCSf)	1.01
CPP normalized in relation to the UoA "PROJ_NURSING_SCI_V1" sub-field set (average=1.00).	
SUM OF FIELD NORMALIZED CITATION SCORE (Sum NCSf)	29.8
NCSf times Frac P.	
TOP 5 % (TOP5%)	5.68
Percentage of papers above the 95th citation percentile.	
VITALITY	1.04
Mean reference age normalized in relation to the sub-field set (average=1, higher=younger).	

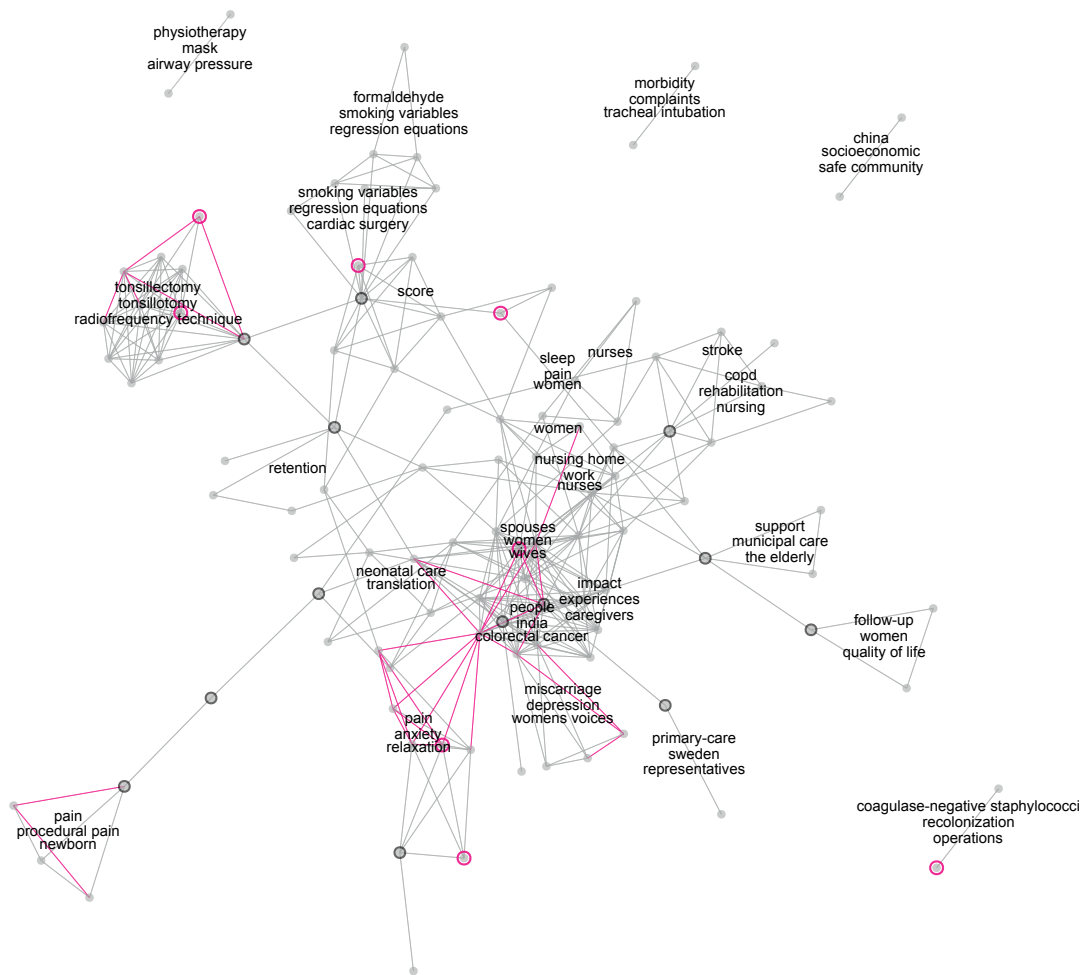


BIBLIOMETRIC INDICATORS

PERCENTAGE NOT CITED PAPERS (PNC)	16
Percentage of not cited papers during the period.	
HIRSCH INDEX (h-index)	11
The h number papers that have at least h citations each.	
AUTHOR MEAN (A_{Um})	4.2
Mean number of authors per paper.	
INTERNATIONAL COLLABORATION MEAN (IntCOLLm)	1.3
Mean number of countries per paper.	



Citation profile: The distribution of field normalized citation score for PROJ_NURSING_SCI_V1 (bars) compared with all papers attributed to Swedish Universities (line).



The map shows papers (nodes) published by PROJ_NURSING_SCI_V1.
 Relations (edges) are based on bibliographic coupling.
 Most frequent keywords are displayed for groups of related papers.
 Papers with high field normalized citation score (>3) are marked with a pink border.
 Edges between publications with high vitality (>1.2) are drawn in pink.

MOST FREQUENT JOURNALS

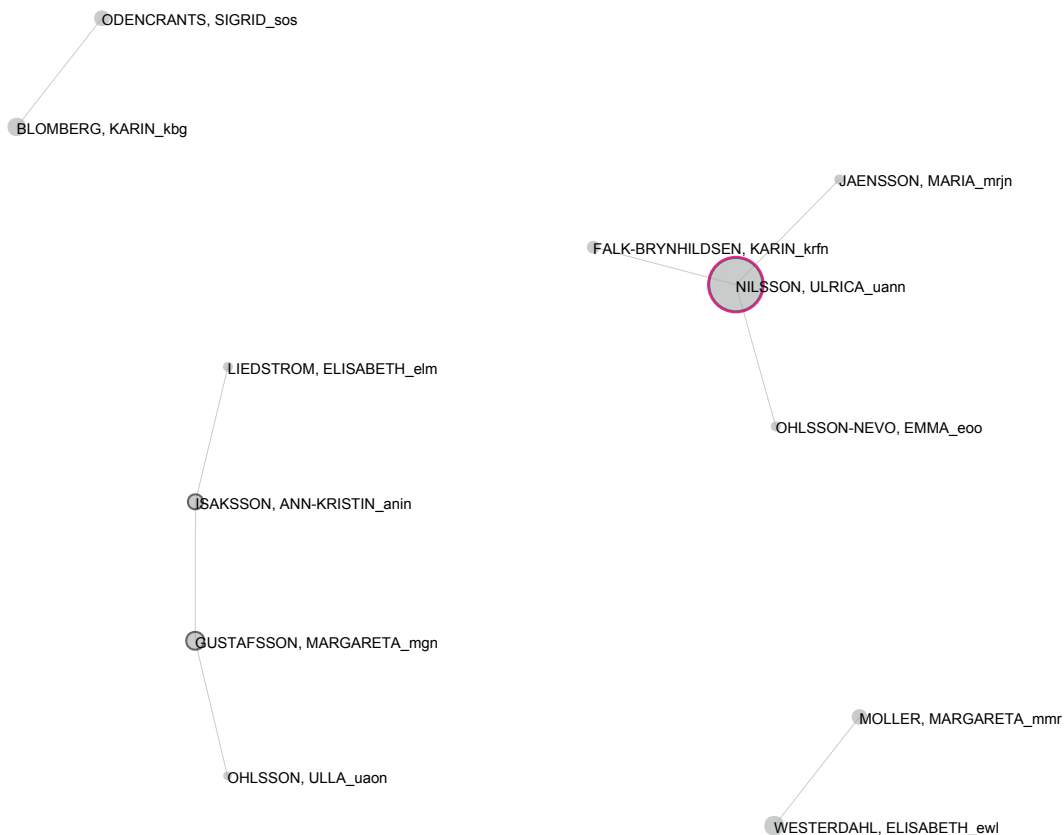
- J CLIN NURS (12)
- SCAND J CARING SCI (6)
- EUR J CARDIOVASC NUR (6)
- ACTA PAEDIATR (5)
- INT J QUAL STUD HEAL (4)
- ACTA OBSTET GYN SCAN (4)
- J NEUROSCI NURS (3)
- EUR ARCH OTO-RHINO-L (3)
- ACTA ANAESTH SCAND (3)
- QUAL HEALTH RES (2)
- LOGOP PHONIATR VOCC (2)
- J PERIANESTH NURS (2)

MOST FREQUENT COLLABORATORS MOST FREQUENT SUBFIELDS

- OREBRO UNIV HOSP (87)
- OREBRO UNIV (86)
- KAROLINSKA INST (35)
- LINKOPING UNIV (32)
- UPPSALA UNIV (22)
- GOTHENBURG UNIV (16)
- SKOVDE UNIV (13)
- SAHLGRENS UNIV HOSP (13)
- OREBRO CTY COUNCIL (13)
- ERSTA SKONDAL UNIV COLL (12)
- JONKOPING UNIV (10)
- HALMSTAD UNIV (10)

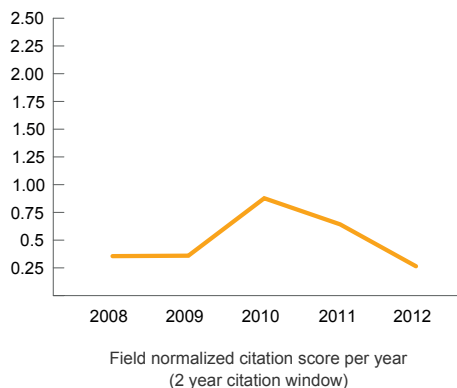
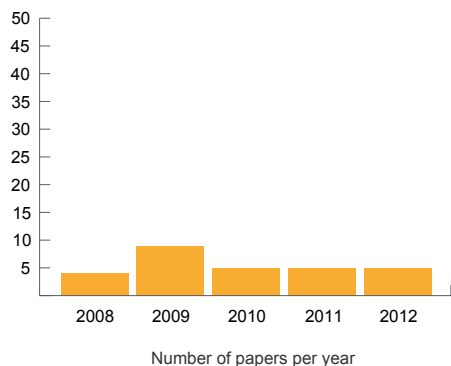
- NURSING (47)
- PUBLIC, ENVIRONMENTAL & OCCUPATIONAL HEALTH (13)
- CARDIOVASCULAR SYSTEM & CARDIOLOGY (12)
- PEDIATRICS (11)
- OTORHINOLARYNGOLOGY (10)
- ONCOLOGY (8)
- ANESTHESIOLOGY (8)
- HEALTH CARE SCIENCES & SERVICES (7)
- OBSTETRICS & GYNECOLOGY (6)
- GENERAL & INTERNAL MEDICINE (6)
- RESPIRATORY SYSTEM (5)
- REHABILITATION (3)

Faculty of Medicine and Health; Health Sciences
Subunit: Nursing Science
COLLABORATION NETWORK



BIBLIOMETRIC INDICATORS

NUMBER OF PAPERS (P)	28
Number of papers (articles, letters and reviews) published by UoA "PROJ_OCCUP_THERAPY_V1" during 2008-2012.	
NUMBER OF FRACTIONALIZED PAPERS (Frac P)	9.1
Sum of author fractionalized papers.	
CITATIONS PER PAPER (CPP)	3.5
Number of citations per paper.	
JOURNAL NORMALIZED CITATION SCORE (NCSj)	0.7
CPP normalized in relation to the UoA "PROJ_OCCUP_THERAPY_V1" journal set (average=1.00).	
NORMALIZED JOURNAL CITATION SCORE (NJCS)	0.68
The impact of the journal set normalized in relation to its sub-fields (average=1.00).	
FIELD NORMALIZED CITATION SCORE (NCSf)	0.53
CPP normalized in relation to the UoA "PROJ_OCCUP_THERAPY_V1" sub-field set (average=1.00).	
SUM OF FIELD NORMALIZED CITATION SCORE (Sum NCSf)	4.8
NCSf times Frac P.	
TOP 5 % (TOP5%)	1.37
Percentage of papers above the 95th citation percentile.	
VITALITY	1.02
Mean reference age normalized in relation to the sub-field set (average=1, higher=younger).	



BIBLIOMETRIC INDICATORS

PERCENTAGE NOT CITED PAPERS (PNC) **29**

Percentage of not cited papers during the period.

HIRSCH INDEX (h-index) **5**

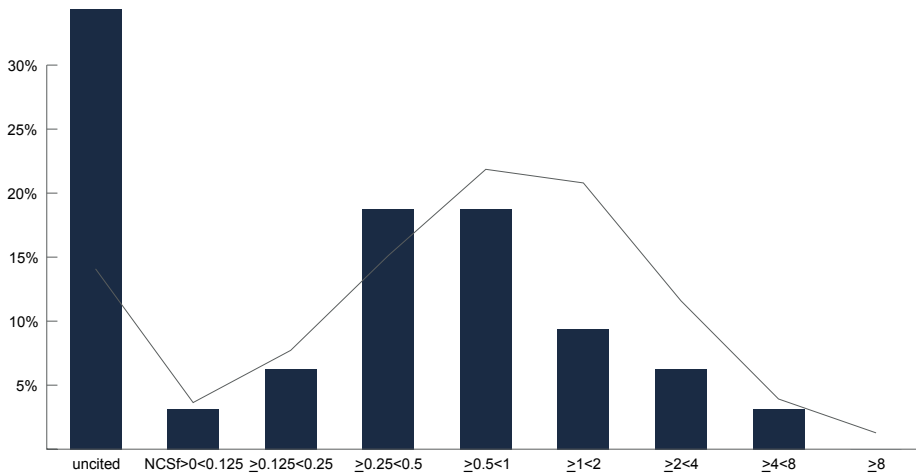
The h number papers that have at least h citations each.

AUTHOR MEAN (AUM) **3.7**

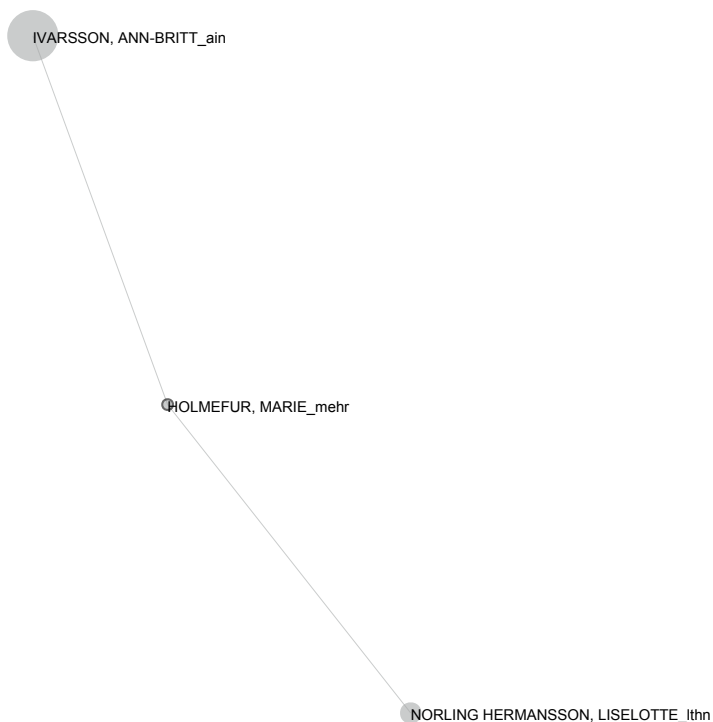
Mean number of authors per paper.

INTERNATIONAL COLLABORATION MEAN (IntCOLLm) **1.2**

Mean number of countries per paper.

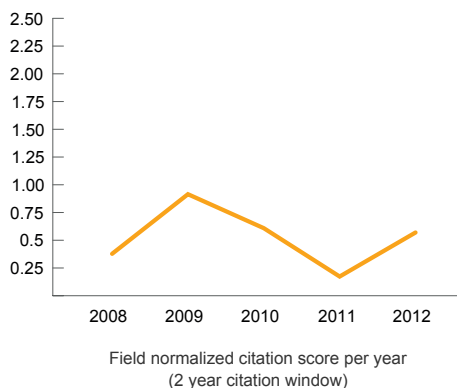
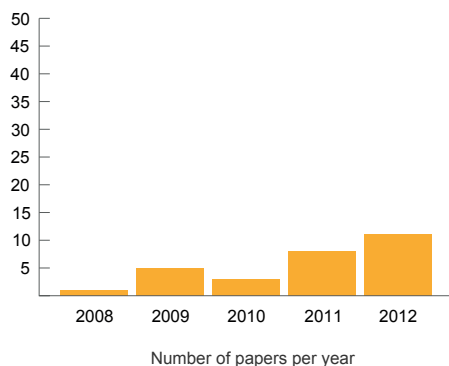


Citation profile: The distribution of field normalized citation score for PROJ_OCCUP_THERAPY_V1 (bars) compared with all papers attributed to Swedish Universities (line).



BIBLIOMETRIC INDICATORS

NUMBER OF PAPERS (P)	28
Number of papers (articles, letters and reviews) published by UoA "PROJ_PUBLIC_HEALTH_V1" during 2008-2012.	
NUMBER OF FRACTIONALIZED PAPERS (Frac P)	11.6
Sum of author fractionalized papers.	
CITATIONS PER PAPER (CPP)	2.6
Number of citations per paper.	
JOURNAL NORMALIZED CITATION SCORE (NCSj)	1.11
CPP normalized in relation to the UoA "PROJ_PUBLIC_HEALTH_V1" journal set (average=1.00).	
NORMALIZED JOURNAL CITATION SCORE (NJCS)	0.68
The impact of the journal set normalized in relation to its sub-fields (average=1.00).	
FIELD NORMALIZED CITATION SCORE (NCSf)	0.5
CPP normalized in relation to the UoA "PROJ_PUBLIC_HEALTH_V1" sub-field set (average=1.00).	
SUM OF FIELD NORMALIZED CITATION SCORE (Sum NCSf)	5.7
NCSf times Frac P.	
TOP 5 % (TOP5%)	0.0
Percentage of papers above the 95th citation percentile.	
VITALITY	1.06
Mean reference age normalized in relation to the sub-field set (average=1, higher=younger).	



BIBLIOMETRIC INDICATORS

PERCENTAGE NOT CITED PAPERS (PNC) **36**

Percentage of not cited papers during the period.

HIRSCH INDEX (h-index) **5**

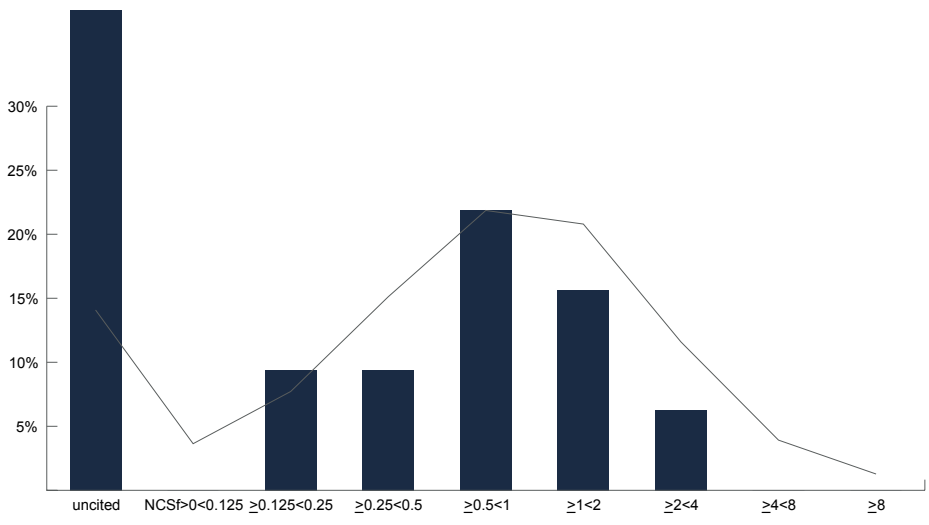
The h number papers that have at least h citations each.

AUTHOR MEAN (Aum) **3.6**

Mean number of authors per paper.

INTERNATIONAL COLLABORATION MEAN (IntCOLLm) **1.5**

Mean number of countries per paper.



Citation profile: The distribution of field normalized citation score for PROJ_PUBLIC_HEALTH_V1 (bars) compared with all papers attributed to Swedish Universities (line).

Faculty of Medicine and Health; Health Sciences
Subunit: Public Health Sciences
PUBLICATION PROFILE



The map shows papers (nodes) published by PROJ_PUBLIC_HEALTH_V1.
 Relations (edges) are based on bibliographic coupling.
 Most frequent keywords are displayed for groups of related papers.
 Papers with high field normalized citation score (>3) are marked with a pink border.
 Edges between publications with high vitality (>1.2) are drawn in pink.

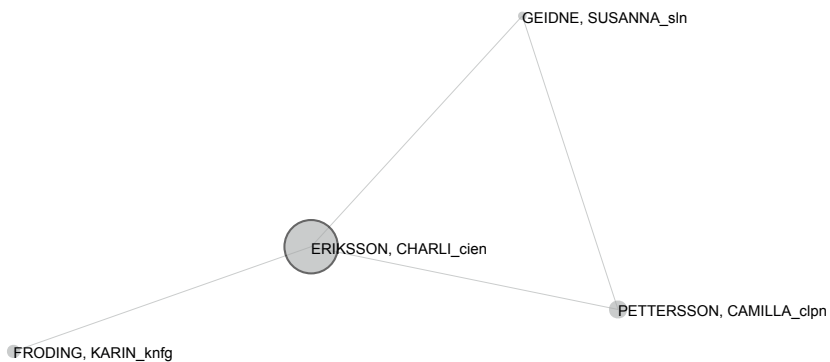
MOST FREQUENT JOURNALS

J BIOSOC SCI (4)
 HEALTHMED (4)
 BMC PUBLIC HEALTH (4)
 SUBST ABUSE TREAT PR (2)
 SCAND J PUBLIC HEALT (2)
 THESCIENFICWORLDJO (1)
 SYST PRACT ACT RES (1)
 PLOS ONE (1)
 OCEAN COAST MANAGE (1)
 J COMMUN HEALTH (1)
 J ADOLESCENT HEALTH (1)
 ITAL J PEDIATR (1)

MOST FREQUENT COLLABORATORS MOST FREQUENT SUBFIELDS

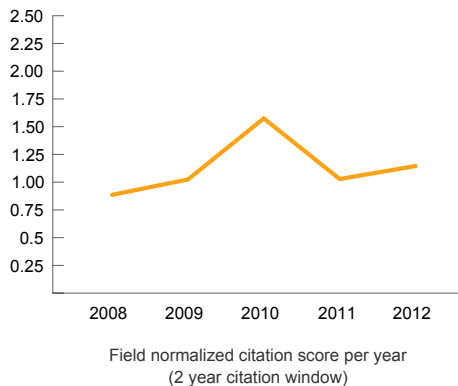
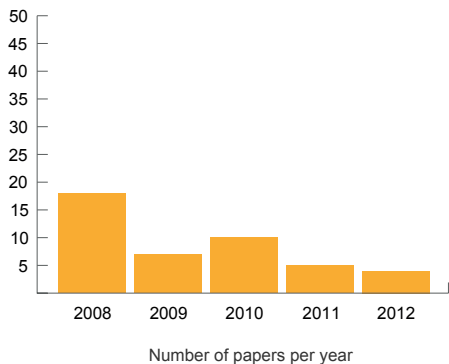
OREBRO UNIV (20)
 LINKOPING UNIV (12)
 KAROLINSKA INST (10)
 SKOVDE UNIV (6)
 FUDAN UNIV (6)
 OREBRO CTY COUNCIL (3)
 IBADAN UNIV (3)
 SOUTHAMPTON UNIV (2)
 KWAZULU NATAL UNIV (2)
 CTR INJURY PREVENT & RES (2)
 VASTMANLAND CTY COUNCIL (1)
 UPPSALA CTY COUNCIL (1)

PUBLIC, ENVIRONMENTAL & OCCUPATIONAL HEALTH (17)
 GENERAL & INTERNAL MEDICINE (5)
 SUBSTANCE ABUSE (4)
 DEMOGRAPHY (4)
 BIOMEDICAL SOCIAL SCIENCES (4)
 SCIENCE & TECHNOLOGY - OTHER TOPICS (2)
 PSYCHOLOGY (2)
 PEDIATRICS (2)
 HEALTH CARE SCIENCES & SERVICES (2)
 ENVIRONMENTAL SCIENCES & ECOLOGY (2)
 WATER RESOURCES (1)
 URBAN STUDIES (1)



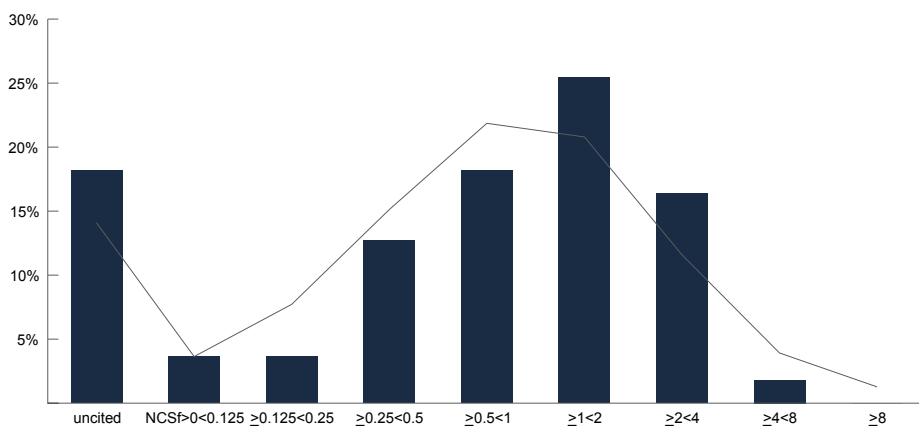
BIBLIOMETRIC INDICATORS

NUMBER OF PAPERS (P)	44
Number of papers (articles, letters and reviews) published by UoA "PROJ_SPORT_V1" during 2008-2012.	
NUMBER OF FRACTIONALIZED PAPERS (Frac P)	17.1
Sum of author fractionalized papers.	
CITATIONS PER PAPER (CPP)	10.4
Number of citations per paper.	
JOURNAL NORMALIZED CITATION SCORE (NCSj)	1.08
CPP normalized in relation to the UoA "PROJ_SPORT_V1" journal set (average=1.00).	
NORMALIZED JOURNAL CITATION SCORE (NJCS)	0.96
The impact of the journal set normalized in relation to its sub-fields (average=1.00).	
FIELD NORMALIZED CITATION SCORE (NCSf)	1.07
CPP normalized in relation to the UoA "PROJ_SPORT_V1" sub-field set (average=1.00).	
SUM OF FIELD NORMALIZED CITATION SCORE (Sum NCSf)	18.4
NCSf times Frac P.	
TOP 5 % (TOP5%)	2.40
Percentage of papers above the 95th citation percentile.	
VITALITY	1.0
Mean reference age normalized in relation to the sub-field set (average=1, higher=younger).	

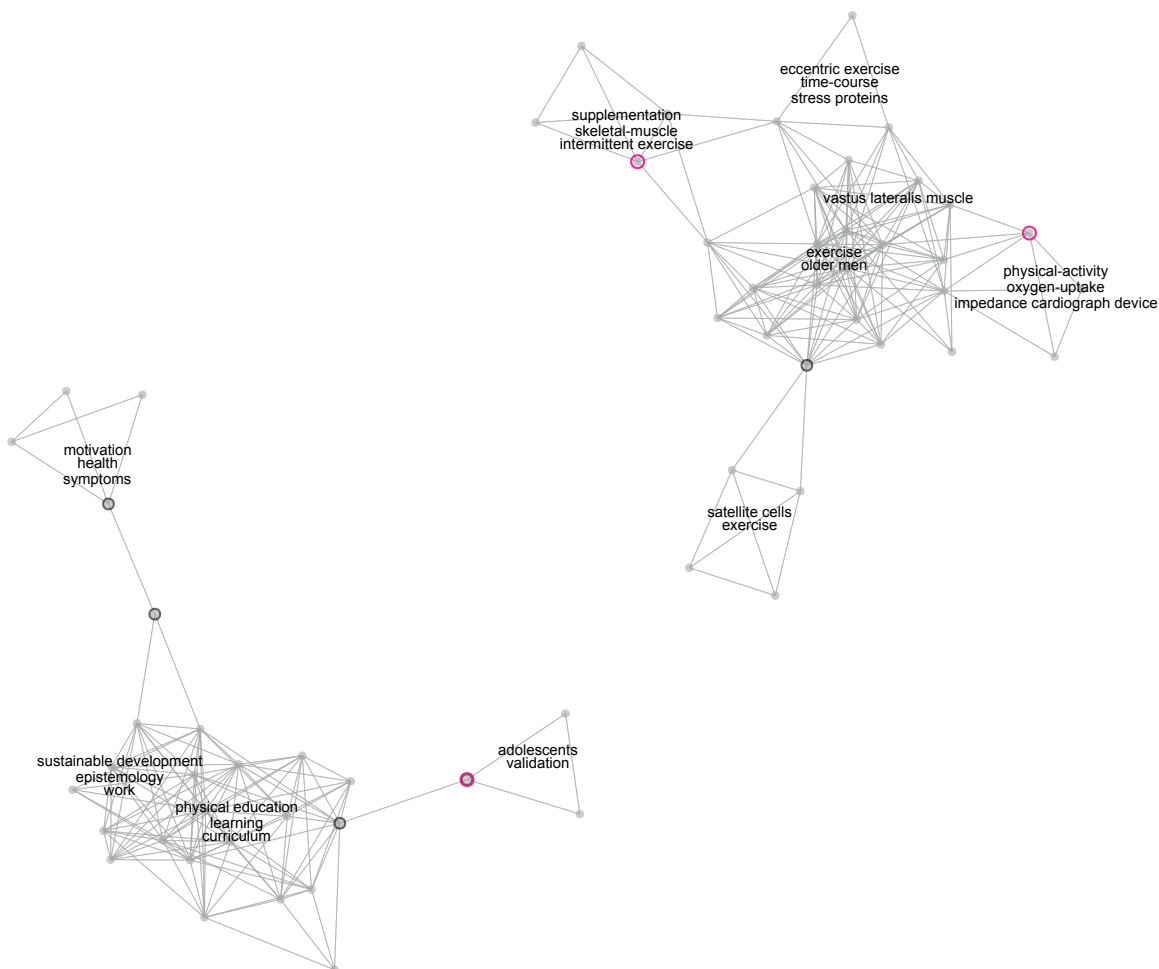


BIBLIOMETRIC INDICATORS

PERCENTAGE NOT CITED PAPERS (PNC)	7
Percentage of not cited papers during the period.	
HIRSCH INDEX (h-index)	13
The h number papers that have at least h citations each.	
AUTHOR MEAN (A_{um})	4.7
Mean number of authors per paper.	
INTERNATIONAL COLLABORATION MEAN (IntCOLL_m)	1.8
Mean number of countries per paper.	



Citation profile: The distribution of field normalized citation score for PROJ_SPORT_V1 (bars) compared with all papers attributed to Swedish Universities (line).



The map shows papers (nodes) published by PROJ_SPORT_V1.
 Relations (edges) are based on bibliographic coupling.
 Most frequent keywords are displayed for groups of related papers.
 Papers with high field normalized citation score (>3) are marked with a pink border.
 Edges between publications with high vitality (>1.2) are drawn in pink.

MOST FREQUENT JOURNALS

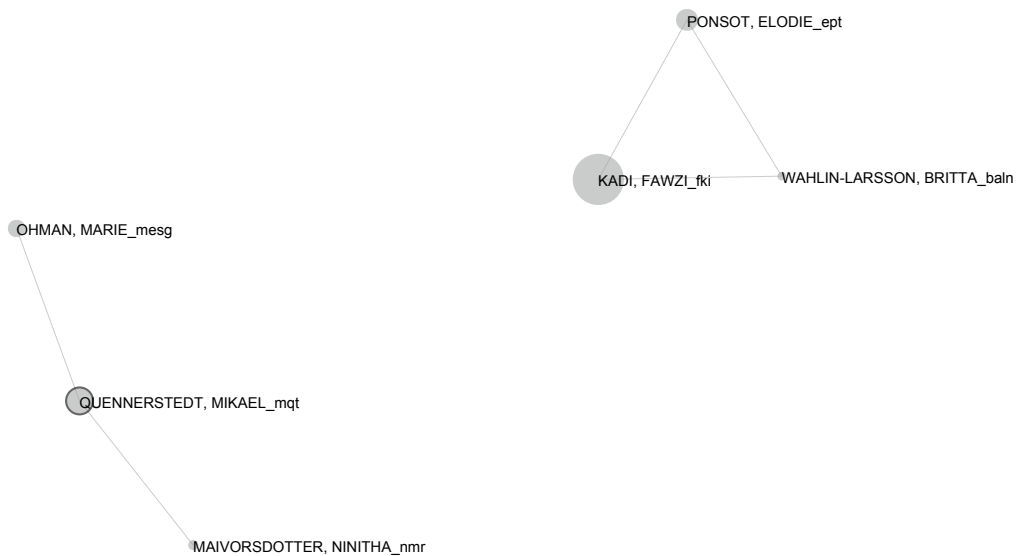
- SPORT EDUC SOC (8)
- SCAND J MED SCI SPOR (7)
- MUSCLE NERVE (4)
- MED SCI SPORT EXER (2)
- J APPL PHYSIOL (2)
- EXP PHYSIOL (2)
- EUR PHYS EDUC REV (2)
- ENVIRON EDUC RES (2)
- AM J PHYSIOL-REG I (2)
- AM J CHINESE MED (2)
- ACTA PHYSIOL (2)
- SPORT PSYCHOL (1)

MOST FREQUENT COLLABORATORS

- OREBRO UNIV (68)
- NORWEGIAN SCH SPORT SCI (9)
- KAROLINSKA INST (7)
- COPENHAGEN UNIV (6)
- UPPSALA UNIV (4)
- SWEDISH SCH SPORT & HLTH SCI (4)
- PITTSBURGH UNIV (4)
- OSLO UNIV (4)
- BOLOGNA UNIV (4)
- BISPEBJERG HOSP (4)
- STOCKHOLM UNIV (3)
- SO DENMARK UNIV (3)

MOST FREQUENT SUBFIELDS

- SPORT SCIENCES (27)
- EDUCATION & EDUCATIONAL RESEARCH (18)
- SOCIAL SCIENCES - OTHER TOPICS (10)
- PHYSIOLOGY (9)
- NEUROSCIENCES & NEUROLOGY (5)
- PUBLIC, ENVIRONMENTAL & OCCUPATIONAL HEALTH (3)
- INTEGRATIVE & COMPLEMENTARY MEDICINE (3)
- RESPIRATORY SYSTEM (2)
- REHABILITATION (2)
- PSYCHOLOGY (2)
- GERIATRICS & GERONTOLOGY (2)
- GENERAL & INTERNAL MEDICINE (2)



Region Örebro län

RÖL-University Hospital

		Web of Science																			
GEN STAT	AUDIT DER US	UNIT	Fra c P FAP	NCSJ	NCSJ	NCSI	VITA LITY	TOP1	TOP5	TOP10	TOP25	TOP50	PNC	Alum	IntCo Llm	PM Points	TOP Level				
Hei	F	ResA	Occu	7	2.2	1.4	0.78	0.73	0.66	1.07	0%	0%	6%	11%	44%	27%	3.2	1.3	3.21	TOP50%	
Una	M	ResA	Biom	95	18.9	16.1	1.53	1.14	1.82	1.26	3%	17%	23%	41%	67%	8%	5.0	2.0	115.18	TOP1%	
Hee	M	PhD	Biom	5	1.4	1.2	1.71	0.74	1.31	0.78	0%	18%	18%	18%	53%	0%	3.5	1.0	5.62	TOP25%	
Moa	F	ResA	Biom	12	2.2	1.8	1.50	0.79	1.29	1.06	0%	4%	7%	36%	75%	0%	5.6	1.1	4.49	TOP25%	
Woa	M	Prof	Biom	14	2.4	2.0	0.51	1.02	0.66	0.91	0%	3%	10%	14%	31%	27%	5.8	1.3	4.15	TOP25%	
Ban	M	PhD	Biom	5	1.2	1.0	1.57	0.90	1.45	0.76	0%	0%	0%	73%	83%	0%	4.3	1.0	3.13	TOP50%	
Axa	F	PhD	Biom	5	1.1	0.9	1.20	0.64	0.77	1.01	0%	0%	0%	23%	23%	23%	4.0%	4.5	1.5	2.84	TOP50%
Jau	F	PhD	Biom	6	1.1	0.9	1.32	0.88	1.09	1.14	0%	0%	7%	40%	72%	0%	5.5	1.4	2.44	TOP50%	
Tha	F	PhD	Biom	5	0.8	0.7	1.86	1.13	1.95	1.02	0%	10%	19%	53%	100%	0%	6.3	2.1	2.15	TOP50%	
Oio	F	PhD	Biom	4	1.1	1.0	1.13	0.89	0.99	1.20	0%	0%	0%	15%	88%	0%	3.5	1.3	1.83	TOP50%	
Sae	F	PhD	Biom	5	0.7	0.6	1.18	0.84	0.90	1.10	0%	0%	0%	29%	47%	0%	7.3	1.9	1.13	TOP50%	
Daaf	F	PhD	Biom	4	0.5	0.4	1.03	0.85	0.86	1.13	0%	0%	12%	24%	56%	0%	7.9	1.5	1.02	<TOP50%	
Bon	F	PhD	Biom	2	0.5	0.5	0.48	1.29	0.67	1.15	0%	0%	0%	38%	38%	0%	3.8	1.4	0.97	<TOP50%	
Haa	F	PhD	Biom	4	0.8	0.7	0.46	0.76	0.30	0.93	0%	0%	0%	0%	0%	20%	4.8	1.5	0.70	<TOP50%	
Wai	M	PhD	Biom	3	0.7	0.6	0.19	0.55	0.11	1.09	0%	0%	0%	0%	73%	4.1	1.0	0.63	<TOP50%		
Ane	F	PhD	Biom	3	0.6	0.5	0.37	0.68	0.18	0.77	0%	0%	0%	0%	5%	41%	4.9	1.4	0.58	<TOP50%	
Til	F	PhD	Biom	3	0.6	0.5	0.42	0.50	0.19	0.91	0%	0%	0%	0%	0%	5.3	1.0	0.48	<TOP50%		
Toi	F	PhD	Biom	1	0.2	0.2	1.07	1.25	1.33	1.18	0%	0%	0%	14%	100%	0%	5.0	1.0	0.34	<TOP50%	
Laa	F	PhD	Biom	2	0.3	0.2	0.12	0.79	0.13	1.17	0%	0%	0%	0%	60%	7.2	1.4	0.24	<TOP50%		
Faa	F	PhD	Biom	1	0.3	0.2	0.34	1.12	0.39	0.96	0%	0%	0%	0%	0%	4.0	1.0	0.21	<TOP50%		
Lua	M	ResA	SIDR	9	4.1	3.5	1.20	1.10	3.15	1.06	3%	9%	9%	26%	48%	6%	2.2	1.2	1.72	TOP5%	
Ang	F	ResA	SIDR	5	1.2	1.4	0.87	0.85	0.86	1.00	0%	0%	0%	19%	59%	0%	4.1	1.8	3.04	TOP50%	
Lia	F	PhD	SIDR	2	0.7	0.6	1.22	0.92	0.95	1.08	0%	0%	0%	0%	77%	0%	3.0	1.5	0.88	<TOP50%	
Gra	F	PhD	SIDR	3	0.4	0.3	0.53	1.09	0.70	0.94	0%	0%	0%	22%	53%	47%	8.5	5.0	0.59	<TOP50%	
Raa	F	PhD	SIDR	2	0.6	0.5	0.00	1.32	0.00	0.88	0%	0%	0%	0%	0%	100%	3.4	1.0	0.50	<TOP50%	
Jau	M	PhD	SIDR	1	0.5	0.4	0.57	0.50	0.29	1.22	0%	0%	0%	0%	0%	2.0	1.0	0.43	<TOP50%		
Be-	M	PhD	SIDR	1	0.2	0.2	0.00	0.87	0.00	0.99	0%	0%	0%	0%	100%	5.0	1.0	0.17	<TOP50%		
Joaf	M	Prof	Surg	50	7.1	6.0	0.97	1.62	1.62	1.10	4%	10%	13%	33%	67%	7%	7.1	1.6	41.50	TOP5%	
Gun	M	ResA	Surg	23	5.7	4.8	1.48	1.05	1.63	1.19	2%	18%	21%	52%	87%	0%	4.1	1.2	34.55	TOP5%	
Raa	M	Prof	Surg	27	9.2	8.1	0.85	1.08	0.89	1.22	0%	3%	15%	25%	41%	28%	2.9	1.5	22.46	TOP5%	
Anw	M	ResA	Surg	35	5.3	4.5	0.74	1.48	1.33	1.02	3%	4%	6%	24%	57%	11%	6.7	1.6	21.67	TOP5%	
Wao	M	Prof	Surg	17	2.0	1.7	1.93	0.90	1.81	1.08	7%	15%	23%	36%	77%	0%	8.5	1.4	18.83	TOP5%	
Nan	M	Prof	Surg	12	1.8	1.6	0.91	1.77	2.54	1.12	9%	9%	13%	29%	51%	14%	6.7	1.6	16.22	TOP10%	
Axj	M	Prof	Surg	9	1.8	1.5	1.68	1.11	1.90	1.12	0%	19%	28%	46%	100%	0%	5.1	1.0	9.49	TOP25%	
Osn	F	PhD	Surg	8	1.5	1.3	1.37	1.12	1.43	0.94	2%	4%	20%	37%	80%	0%	5.2	1.0	7.62	TOP25%	
Ese	M	PhD	Surg	4	0.6	0.5	2.62	1.29	3.36	1.18	0%	52%	78%	78%	100%	0%	6.2	1.0	7.36	TOP25%	
Mae	M	ResA	Surg	12	2.3	1.9	1.22	1.02	1.38	0.86	0%	4%	20%	43%	70%	0%	5.3	1.1	6.85	TOP25%	
Lah	M	PhD	Surg	10	2.6	2.2	1.36	0.72	0.93	1.17	0%	6%	6%	20%	39%	19%	3.8	1.5	5.70	TOP25%	
Frr	M	ResA	Surg	8	1.8	1.5	1.40	0.80	1.06	1.10	0%	0%	19%	21%	63%	8%	4.5	1.0	4.77	TOP25%	
Soo	M	PhD	Surg	9	1.9	1.6	1.95	0.51	1.05	1.20	0%	0%	15%	29%	62%	24%	4.8	2.4	4.14	TOP25%	
Kie	M	PhD	Surg	3	0.5	0.4	0.88	1.84	1.92	1.24	0%	42%	42%	42%	77%	0%	6.3	1.7	3.79	TOP25%	
Lio	M	ResA	Surg	4	0.6	0.5	0.90	2.66	2.20	0.99	0%	0%	51%	75%	100%	0%	6.6	1.2	3.32	TOP50%	
Fae	F	PhD	Surg	2	0.6	0.5	1.78	0.86	1.39	1.02	0%	0%	43%	43%	47%	0%	3.4	1.0	2.46	TOP50%	
Lii	M	PhD	Surg	3	0.6	0.5	1.64	1.03	1.83	0.97	0%	17%	33%	45%	100%	0%	5.0	1.0	2.39	TOP50%	
Ahe	F	PhD	Surg	5	2.0	2.3	0.14	0.72	0.12	0.95	0%	0%	0%	0%	59%	2.5	1.0	2.32	TOP50%		
Ana	M	PhD	Surg	4	0.6	0.5	0.95	0.98	1.10	1.40	0%	14%	27%	34%	54%	33%	6.6	1.1	1.94	TOP50%	
Ahn	M	PhD	Surg	5	1.0	0.9	1.94	0.40	0.86	0.94	0%	0%	8%	24%	49%	0%	4.9	1.0	1.73	TOP50%	
Svo	M	ResA	Surg	2	0.7	0.6	0.72	0.92	0.68	0.90	0%	0%	0%	50%	50%	50%	3.0	1.0	1.42	TOP50%	
Bea	M	ResA	Surg	2	0.4	0.3	1.62	0.93	1.48	1.13	0%	0%	0%	100%	100%	0%	5.0	1.5	1.37	TOP50%	
Huv	M	ResA	Surg	3	1.2	1.0	0.97	0.50	0.48	0.98	0%	0%	0%	0%	18%	0%	2.6	1.0	1.35	TOP50%	
Hoa	M	PhD	Surg	3	0.9	0.8	0.46	0.83	0.53	1.05	0%	0%	0%	17%	27%	0%	3.3	1.0	1.09	<TOP50%	
Sil	M	PhD	Surg	4	1.0	0.9	0.36	0.96	0.35	1.02	0%	0%	0%	4%	24%	3.9	1.0	0.95	<TOP50%		
Jaj	M	ResA	Surg	4	1.1	0.9	0.38	0.68	0.24	0.99	0%	0%	0%	0%	11%	0%	3.8	1.0	0.94	<TOP50%	
Zea	F	PhD	Surg	1	0.3	0.2	0.71	2.08	1.48	0.88	0%	0%	0%	100%	100%	0%	4.0	1.0	0.85	<TOP50%	
Dra	M	PhD	Surg	3	0.6	0.5	0.67	0.52	0.51	1.42	0%	0%	6%	18%	34%	55%	4.9	2.0	0.83	<TOP50%	
Crr	F	PhD	Surg	3	0.7	0.6	0.53	0.88	0.39	0.96	0%	0%	0%	0%	24%	0%	4.3	1.0	0.74	<TOP50%	
Saa	M	PhD	Surg	2	0.4	0.3	0.95	0.77	0.73	0.91	0%	0%	0%	0%	69%	0%	5.5	1.0	0.80	<TOP50%	
Rut	M	PhD	Surg	2	0.2	0.2	0.96	1.12	1.15	1.08	0%	0%	0%	41%	100%	0%	8.2	1.0	0.59	<TOP50%	
Ske	M	PhD	Surg	1	0.3	0.2	1.01	1.40	1.53	1.19	0%	0%	0%	61%	100%	0%	4.0	1.0	0.52	<TOP50%	
Via	M	PhD	Surg	3	0.5	0.4	0.98	0.75	0.40	0.80	0%	0%	0%	7%	20%	29%	6.1	1.0	0.51	<TOP50%	
Bau	F	PhD	Surg	2	0.2	0.2	0.98	1.37	1.32	1.10	0%	0%	0%	40%	100%	0%	8.9	1.4	0.44	<TOP50%	
Caa	M	PhD	Surg	3	0.5	0.4	0.35	0.55	0.19	0.93	0%	0%	0%	0%	0%	6.2	1.2	0.42	<TOP50%		
Oto	M	PhD	Surg	2	0.5	0.4	0.22	0.84	0.19	1.13	0%	0%	0%	0%	56%	4.4	1.0	0.38	<TOP50%		
Mai	M	PhD	Surg	1	0.2	0.2	0.63	0.79	0.49	1.14	0%	0%	0%	0%	5%	0%	5.0	1.0	0.19	<TOP50%	
Luo	M	Prof	Medi	59	16.1	13.8	1.13	1.46	1.74	1.20	4%	7%	19%	37%	61%	24%	3.7	1.6	95.80	TOP1%	
Tyu	M	Prof	Medi	26	3.4	2.9	1.80	1.27	2.43	1.11	15%	24%	31%	49%	74%	13%	7.8	1.7	53.31	TOP1%	
Hae	M	Prof	Medi	30	7.8	6.7	1.75	0.79	1.52	1.13	1%	11%	24%	40%	55%	9%	3.8	1.7	31.20	TOP5%	
Nil	F	ResA	Medi	3	1.0	0.9	3.33	1.12	4.21	0.98	25%	50%	50%	50%	100%	0%	3.0	1.0	26.46	TOP5%	
Maa	M	PhD	Medi	5	1.6	1.4	3.12	0.84	2.72	0.93	12%	33%	33%	69%	100%	0%	3.1	1.0	25.60	TOP5%	
Fra	M	ResA	Medi	30	6.5	5.6	1.35	0.86	1.17	1.18	1%	9%	12%	33%	55%	13%	4.7	1.2	19.36	TOP5%	
Ape	M	ResA	Medi	14	2.6	2.2	1.48	1.14	1.60	1.08	0%	15%	20%	51%	77%	0%	5.4	1.2	11.68	TOP10%	
Est	F	PhD	Medi	8	1.5	1.3	2.62	0.98	2.43	1.01	0%	19%	55%	83%	95%	0%	5.3	1.0	10.28	TOP10%	
Kaa	M	ResA	Medi	7	1.3	1.1	0.78	1.34	2.08	1.00	7%	7%	7%	14%	37%	19%	5.4	1.9	9.43	TOP25%	
Abo	M	PhD	Medi	2	0.3	0.3	1.66	1.21	2.95	1.13	33%	33%	33%	33%	49%	0%	6.7	2.7	8.78	TOP25%	
Aho	M	ResA	Medi	18	2.8	2.3	0.78	1.33	0.86	1.07	0%	7%	11%	28%	43%	0%	6.4	1.6	8.02	TOP25%	
Noo	M	PhD	Medi	7	1.7	1.4	1.13	1.10	1.35	1.2											

RÖL-University Hospital

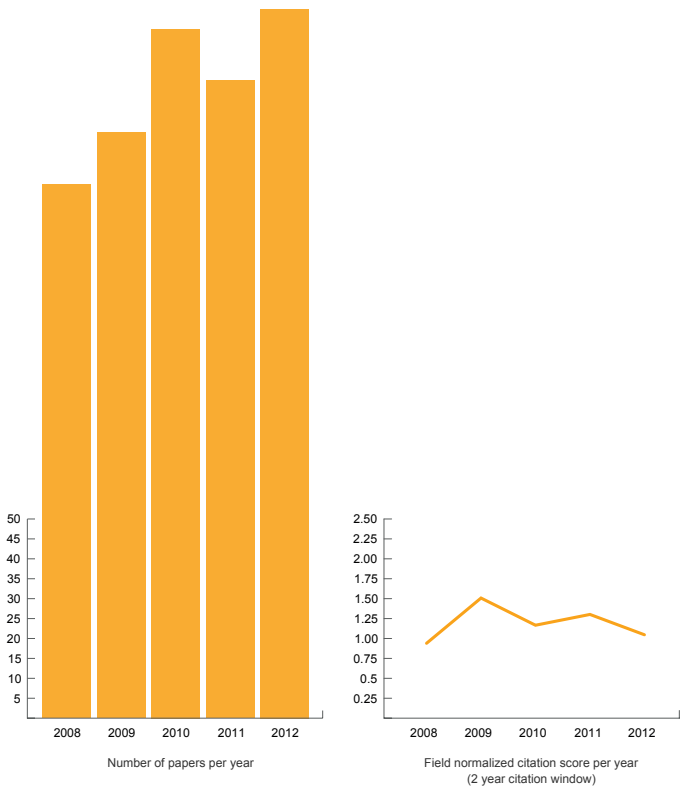
GEN STAT		Web of Science																			
AUID	DER	UNIT	Fra	NCS				VITA				TOP				INCO	PM				
			P	c	P	FAP	NCS	NJCS	INCS	LIT	TOP1	TOP5	TOP10	TOP25	TOP50	PNC	AUM	LIm	Points	TOP Level	
Kaa	M	Prof Medi	11	2.2	1.8	0.84	0.73	0.61	1.07	0%	0%	2%	11%	48%	8%	5.1	1.1	2.98		TOP50%	
The	M	ResA Medi	9	2.5	2.2	0.23	0.80	0.26	1.06	0%	0%	0%	0%	20%	40%	3.6	1.0	2.77		TOP50%	
Kah	M	PhD Medi	3	0.4	0.3	1.93	0.86	2.06	1.09	0%	38%	38%	45%	69%	0%	7.4	1.3	2.73		TOP50%	
Eme	M	ResA Medi	10	2.7	2.3	0.19	0.70	0.15	1.07	0%	0%	0%	0%	4%	39%	3.8	1.0	2.44		TOP50%	
Fon	F	ResA Medi	4	1.5	1.4	0.87	0.97	0.80	0.88	0%	0%	0%	0%	74%	0%	2.7	1.0	2.17		TOP50%	
Ohn	M	PhD Medi	5	0.9	0.8	1.17	0.97	1.16	1.05	0%	0%	0%	39%	78%	0%	5.4	1.0	1.94		TOP50%	
Arr	F	ResA Medi	5	1.1	0.9	1.15	0.84	0.89	0.90	0%	0%	0%	31%	62%	0%	4.8	1.0	1.94		TOP50%	
Gea	M	ResA Medi	7	1.7	1.4	0.38	0.98	0.34	1.10	0%	0%	0%	3%	27%	49%	4.2	1.1	1.88		TOP50%	
Eji	F	PhD Medi	4	1.0	0.9	0.34	2.31	0.79	0.98	0%	0%	0%	0%	85%	0%	4.0	1.0	1.66		TOP50%	
Jon	F	PhD Medi	3	0.8	0.7	0.91	1.26	1.23	1.02	0%	0%	0%	53%	74%	26%	3.8	1.0	1.59		TOP50%	
Ans	F	PhD Medi	2	1.0	1.1	0.42	1.40	0.69	0.79	0%	0%	0%	25%	50%	50%	2.0	1.5	1.57		TOP50%	
Vie	M	PhD Medi	3	0.4	0.3	0.85	2.05	1.46	1.10	0%	14%	14%	67%	80%	0%	13.9	1.9	1.57		TOP50%	
Haa	M	PhD Medi	3	0.8	0.6	1.02	1.01	0.95	1.08	0%	0%	0%	22%	100%	0%	4.0	1.0	1.56		TOP50%	
Por	M	PhD Medi	4	0.9	0.7	0.67	0.80	0.70	0.94	0%	10%	19%	57%	29%	4.6	1.0	1.46		TOP50%		
Rae	M	PhD Medi	7	1.7	1.5	0.53	0.45	0.18	1.08	0%	0%	0%	0%	12%	4.1	1.2	1.45		TOP50%		
Gun	D	PhD Medi	3	0.6	0.5	1.65	0.95	1.29	0.87	0%	0%	0%	55%	97%	0%	5.0	1.0	1.43		TOP50%	
Eka	D	PhD Medi	3	1.2	1.0	0.81	0.62	0.53	0.90	0%	0%	0%	0%	55%	29%	2.6	1.0	1.37		TOP50%	
Ahe	F	PhD Medi	8	1.5	1.3	0.38	0.71	0.32	1.01	0%	0%	0%	0%	16%	14%	5.5	1.4	1.35		TOP50%	
Jat	M	PhD Medi	2	0.4	0.4	0.68	1.73	1.16	0.95	0%	0%	0%	77%	77%	0%	4.6	1.0	1.22		TOP50%	
Ano	M	ResA Medi	8	1.3	1.1	0.40	0.65	0.23	1.00	0%	0%	0%	14%	13%	6.1	1.2	1.22		TOP50%		
Loa	F	PhD Medi	3	1.0	0.9	0.63	0.69	0.46	0.81	0%	0%	0%	0%	32%	0%	2.9	1.2	1.16		TOP50%	
Hoa	M	ResA Medi	3	0.5	0.4	1.87	0.64	1.22	0.90	0%	0%	0%	50%	84%	0%	6.0	1.0	1.16		TOP50%	
Lia	F	PhD Medi	3	1.0	0.9	0.56	1.13	0.71	1.18	0%	0%	0%	15%	33%	0%	3.0	1.0	1.14		TOP50%	
Pee	M	PhD Medi	4	0.8	0.7	0.88	0.82	0.72	0.97	0%	0%	0%	0%	56%	0%	4.7	1.0	1.14		TOP50%	
Lij	M	PhD Medi	3	0.7	0.6	1.44	0.49	0.78	0.94	0%	0%	0%	29%	29%	0%	4.3	1.0	1.11		<TOP50%	
Sjn	M	PhD Medi	3	0.8	0.7	1.39	0.54	0.56	0.94	0%	0%	0%	0%	52%	0%	3.8	1.0	1.08		<TOP50%	
Lia	M	PhD Medi	4	1.0	0.9	0.10	1.04	0.17	1.16	0%	0%	0%	0%	20%	80%	4.0	1.0	1.03		<TOP50%	
Pea	M	ResA Medi	2	0.5	0.5	1.02	0.82	0.89	0.93	0%	0%	0%	28%	57%	0%	3.8	1.0	0.97		<TOP50%	
Ale	M	PhD Medi	4	0.5	0.4	0.72	1.32	0.95	1.01	0%	0%	0%	33%	70%	0%	8.5	1.5	0.88		<TOP50%	
Hai	M	PhD Medi	3	1.0	0.9	0.35	0.62	0.24	0.92	0%	0%	0%	0%	33%	0%	3.0	1.0	0.85		<TOP50%	
Rav	F	ResA Medi	5	0.7	0.6	0.57	0.91	0.48	0.98	0%	0%	0%	0%	41%	0%	7.1	1.6	0.84		<TOP50%	
Hul	M	ResA Medi	4	0.8	0.6	0.42	0.60	0.27	1.11	0%	0%	0%	0%	22%	22%	5.3	2.4	0.78		<TOP50%	
Sta	F	PhD Medi	2	0.7	0.6	0.48	0.22	0.26	1.03	0%	0%	0%	0%	29%	71%	2.9	1.0	0.77		<TOP50%	
Loa	M	PhD Medi	4	0.6	0.6	0.23	0.98	0.26	0.94	0%	0%	0%	0%	34%	62%	6.2	1.3	0.78		<TOP50%	
vai	M	ResA Medi	3	0.8	0.7	0.32	0.81	0.20	0.99	0%	0%	0%	0%	0%	3.9	2.1	0.66		<TOP50%		
Ahr	M	PhD Medi	2	0.5	0.4	0.85	0.83	0.70	0.88	0%	0%	0%	0%	49%	0%	4.4	1.0	0.59		<TOP50%	
Joe	M	PhD Medi	2	0.3	0.2	0.81	1.18	1.06	0.88	0%	0%	0%	55%	74%	26%	7.4	2.6	0.57		<TOP50%	
Cra	M	PhD Medi	1	0.3	0.3	1.28	0.85	1.16	1.07	0%	0%	0%	34%	100%	0%	3.0	1.0	0.57		<TOP50%	
Nox	M	PhD Medi	2	0.7	0.6	0.60	0.67	0.39	1.03	0%	0%	0%	0%	0%	0%	3.0	1.0	0.57		<TOP50%	
Nyj	M	ResA Medi	2	0.5	0.4	1.03	0.61	0.66	1.10	0%	0%	0%	17%	44%	0%	4.4	1.0	0.55		<TOP50%	
Scr	M	PhD Medi	3	0.4	0.4	0.78	0.62	0.45	0.65	0%	0%	0%	0%	48%	0%	7.2	2.3	0.53		<TOP50%	
Ele	M	PhD Medi	2	0.3	0.2	0.56	0.98	0.70	0.98	0%	0%	0%	0%	40%	40%	0%	7.2	1.0	0.52		<TOP50%
Nov	F	PhD Medi	1	0.3	0.3	0.98	0.58	0.57	0.99	0%	0%	0%	0%	31%	0%	3.0	1.0	0.46		<TOP50%	
Baa	M	PhD Medi	1	0.3	0.3	0.68	0.72	0.49	0.91	0%	0%	0%	0%	29%	0%	3.0	1.0	0.45		<TOP50%	
Ste	F	PhD Medi	2	0.5	0.4	0.25	0.94	0.21	1.15	0%	0%	0%	0%	7%	44%	4.4	1.4	0.44		<TOP50%	
Str	M	PhD Medi	1	0.2	0.2	0.85	0.79	0.67	0.76	0%	0%	0%	0%	100%	0%	5.0	1.0	0.34		<TOP50%	
Asa	F	PhD Medi	2	0.2	0.2	0.34	1.09	0.38	0.98	0%	0%	0%	0%	21%	0%	11.0	1.0	0.22		<TOP50%	
Lua	F	PhD Medi	1	0.1	0.1	0.00	0.49	0.00	1.08	0%	0%	0%	0%	0%	100%	7.0	1.0	0.12		<TOP50%	
Hor	M	PhD Nurs	2	0.5	0.4	2.02	2.09	4.20	1.14	0%	88%	100%	100%	100%	0%	4.2	1.0	11.00		TOP10%	
Kja	M	ResA Nurs	17	3.5	3.2	0.66	0.75	0.53	0.96	0%	1%	4%	15%	21%	25%	4.9	2.2	5.68		TOP25%	
Svi	F	PhD Nurs	8	1.5	2.2	1.04	1.03	1.21	1.02	0%	1%	2%	44%	77%	0%	5.3	2.0	5.33		TOP25%	
Bja	F	PhD Nurs	7	2.3	2.1	1.37	0.81	0.86	0.96	0%	0%	0%	18%	68%	22%	3.0	1.5	4.60		TOP25%	
Zan	F	PhD Nurs	4	1.4	1.2	1.08	0.65	0.95	1.18	0%	0%	0%	46%	64%	36%	2.9	1.0	3.84		TOP25%	
Sku	M	PhD Nurs	3	1.0	0.9	1.66	0.84	1.48	1.05	0%	0%	17%	33%	75%	0%	3.0	1.0	2.80		TOP50%	
Sog	F	PhD Nurs	5	1.4	1.2	0.95	0.84	0.65	0.89	0%	0%	0%	8%	63%	18%	3.5	1.8	1.92		TOP50%	
Gra	F	PhD Nurs	2	1.0	0.9	0.84	0.87	0.73	1.21	0%	0%	0%	0%	100%	0%	2.0	1.0	1.71		TOP50%	
Eda	F	PhD Nurs	2	1.0	0.9	0.84	0.86	0.74	0.93	0%	0%	0%	0%	64%	0%	2.0	1.0	1.51		TOP50%	
Blu	F	PhD Nurs	1	0.5	0.4	1.42	0.60	0.84	0.82	0%	0%	0%	0%	100%	0%	2.0	1.0	1.43		TOP50%	
Cav	F	PhD Nurs	2	0.8	0.6	0.85	1.06	0.96	1.15	0%	0%	0%	31%	45%	0%	2.7	1.0	1.36		TOP50%	
Non	F	PhD Nurs	3	1.0	0.9	0.49	0.81	0.37	1.03	0%	0%	0%	0%	31%	17%	3.0	1.0	1.10		<TOP50%	
Ohm	F	PhD Nurs	1	0.3	0.2	1.60	1.21	1.93	0.92	0%	0%	0%	92%	100%	0%	4.0	2.0	0.79		<TOP50%	
Jie	M	PhD Nurs	1	0.2	0.2	1.82	0.82	1.50	1.04	0%	0%	0%	100%	100%	0%	5.0	1.0	0.68		<TOP50%	
Skl	F	PhD Nurs	2	0.5	0.4	0.16	1.51	0.42	0.96	0%	0%	0%	0%	50%	50%	4.0	1.0	0.64		<TOP50%	
Tha	F	PhD Nurs	3	0.4	0.3	0.65	0.93	0.58	0.86	0%	0%	0%	0%	77%	0%	7.5	1.2	0.61		<TOP50%	
Ale	F	PhD Nurs	2	0.4	0.3	1.36	0.40	0.65	0.99	0%	0%	0%	0%	90%	0%	5.5	1.0	0.56		<TOP50%	
Aia	F	PhD Nurs	2	0.5	0.4	0.44	0.88	0.37	1.03	0%	0%	0%	0%	0%	0%	4.0	1.0	0.43		<TOP50%	
Wan	F	PhD Nurs	1	0.3	0.2	0.00	0.85	0.00	1.01	0%	0%	0%	0%	0%	100%	4.0	1.0	0.21		<TOP50%	

PRODUCTION
2013
PERSONNEL
152
PRODUCTIVITY
1.32

ABBR:
AUID See Annex F
SUBUNIT Occu=RÖL Occupational Therapy; Biom=RÖL Biomedicine; SIDR=RÖL Disability Science; Surg=Surgery; Med=RÖL Medicine; Nurs=RÖL Nursing Science
STATUS Prof=Professor; Seni=Senior Lecturer; Asso=Associate Prof; ResA=Research Assoc; Rese=Researcher; Post=Postdoc

BIBLIOMETRIC INDICATORS

NUMBER OF PAPERS (P)	792
Number of papers (articles, letters and reviews) published by UoA "proj_rol_v4" during 2008-2012.	
NUMBER OF FRACTIONALIZED PAPERS (Frac P)	231.6
Sum of author fractionalized papers.	
CITATIONS PER PAPER (CPP)	9.2
Number of citations per paper.	
JOURNAL NORMALIZED CITATION SCORE (NCSj)	1.07
CPP normalized in relation to the UoA "proj_rol_v4" journal set (average=1.00).	
NORMALIZED JOURNAL CITATION SCORE (NJCS)	1.03
The impact of the journal set normalized in relation to its sub-fields (average=1.00).	
FIELD NORMALIZED CITATION SCORE (NCSf)	1.18
CPP normalized in relation to the UoA "proj_rol_v4" sub-field set (average=1.00).	
SUM OF FIELD NORMALIZED CITATION SCORE (Sum NCSf)	274.4
NCSf times Frac P.	
TOP 5 % (TOP5%)	6.49
Percentage of papers above the 95th citation percentile.	
VITALITY	1.08
Mean reference age normalized in relation to the sub-field set (average=1, higher=younger).	



BIBLIOMETRIC INDICATORS

PERCENTAGE NOT CITED PAPERS (PNC) 11

Percentage of not cited papers during the period.

HIRSCH INDEX (h-index) 42

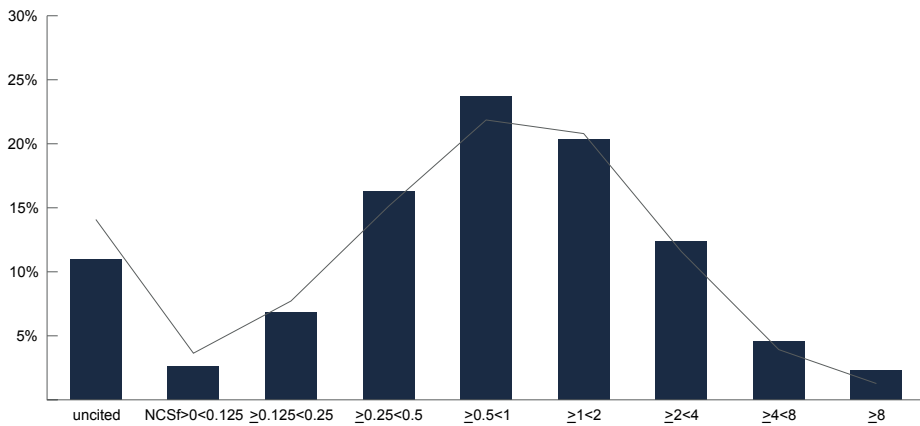
The h number papers that have at least h citations each.

AUTHOR MEAN (AUm) 10.8

Mean number of authors per paper.

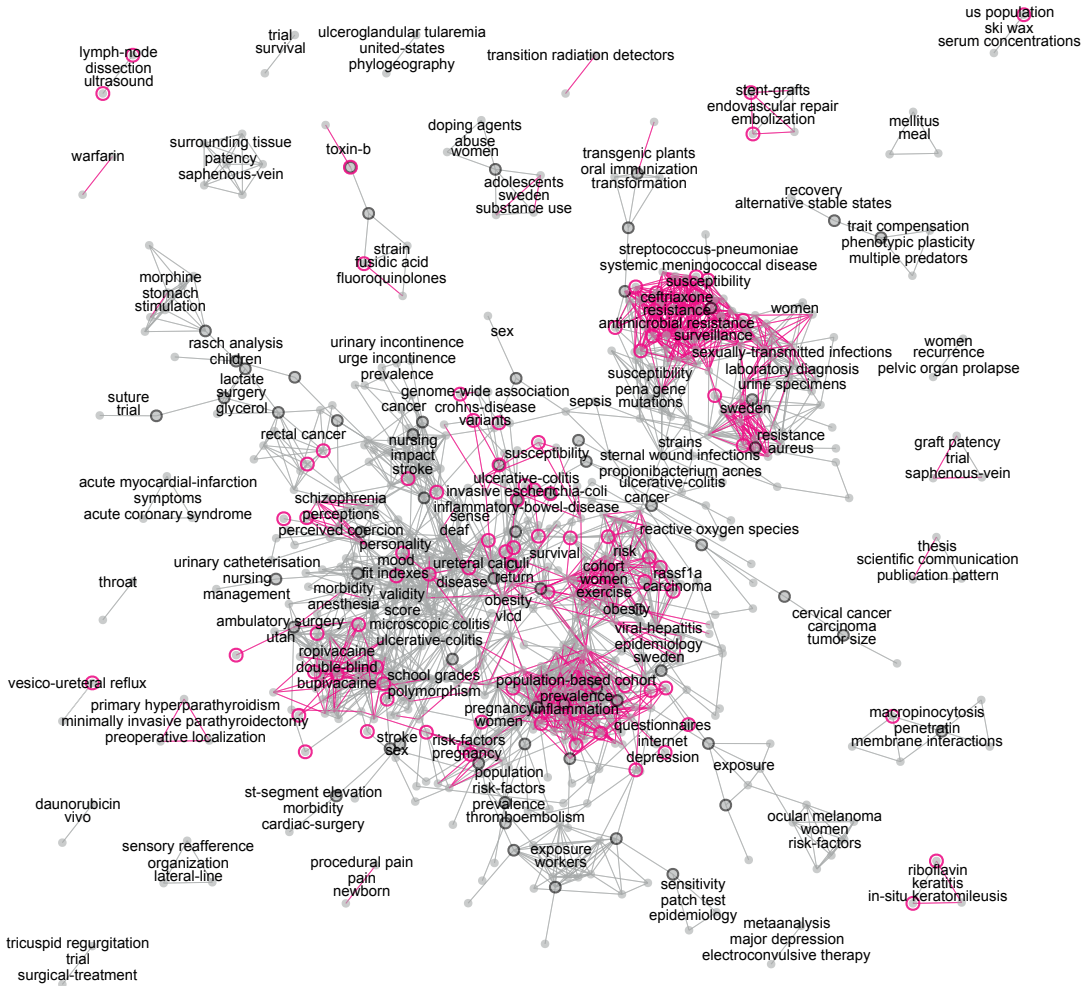
INTERNATIONAL COLLABORATION MEAN (IntCOLLm) 1.9

Mean number of countries per paper.



Citation profile: The distribution of field normalized citation score for proj_rol_v4 (bars) compared with all papers attributed to Swedish Universities (line).

Region Örebro län
 Unit of Evaluation: Region Örebro län
 PUBLICATION PROFILE



The map shows papers (nodes) published by proj_rol_v4. Relations (edges) are based on bibliographic coupling. Most frequent keywords are displayed for groups of related papers. Papers with high field normalized citation score (>3) are marked with a pink border. Edges between publications with high vitality (>1.2) are drawn in pink.

MOST FREQUENT JOURNALS

- EUROSURVEILLANCE (16)
- APMIS (16)
- ACTA ANAESTH SCAND (16)
- ANTIMICROB AGENTS CH (12)
- SCAND J UROL NEPHROL (9)
- SCAND J GASTROENTERO (9)
- EUR J CLIN MICROBIOL (9)
- ACTA PAEDIATR (9)
- SCAND J INFECT DIS (8)
- INFLAMM BOWEL DIS (8)
- ACTA DERM-VENEREOL (8)
- STROKE (7)

MOST FREQUENT COLLABORATORS

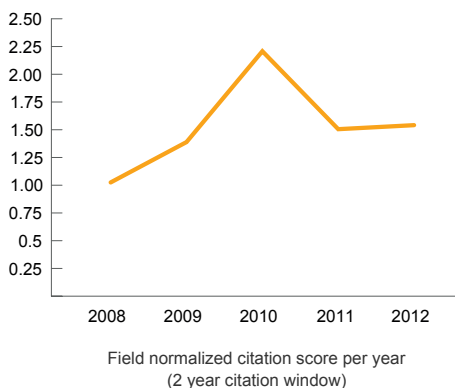
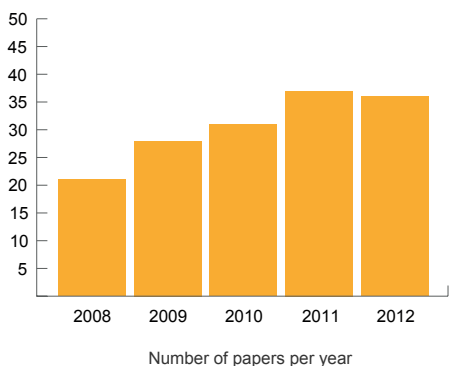
- ÖREBRO UNIV HOSP (687)
- KAROLINSKA INST (297)
- ÖREBRO UNIV (265)
- UPPSALA UNIV (141)
- KAROLINSKA UNIV HOSP (102)
- HOSP UNIV (91)
- LINKÖPING UNIV (72)
- UPPSALA HOSP UNIV (68)
- GOTHENBURG UNIV (68)
- LUND UNIV (62)
- ÖREBRO CTY COUNCIL (54)
- HARVARD UNIV (54)

MOST FREQUENT SUBFIELDS

- ONCOLOGY (80)
- INFECTIOUS DISEASES (68)
- GASTROENTEROLOGY & HEPATOLOGY (67)
- MICROBIOLOGY (64)
- PUBLIC, ENVIRONMENTAL & OCCUPATIONAL HEALTH (54)
- CARDIOVASCULAR SYSTEM & CARDIOLOGY (54)
- ANESTHESIOLOGY (41)
- SURGERY (39)
- IMMUNOLOGY (34)
- UROLOGY & NEPHROLOGY (29)
- PHARMACOLOGY & PHARMACY (29)
- DENTISTRY, ORAL SURGERY & MEDICINE (29)

BIBLIOMETRIC INDICATORS

NUMBER OF PAPERS (P)	153
Number of papers (articles, letters and reviews) published by UoA "proj_roj_v5biomed" during 2008-2012.	
NUMBER OF FRACTIONALIZED PAPERS (Frac P)	35.4
Sum of author fractionalized papers.	
CITATIONS PER PAPER (CPP)	10.2
Number of citations per paper.	
JOURNAL NORMALIZED CITATION SCORE (NCSj)	1.30
CPP normalized in relation to the UoA "proj_roj_v5biomed" journal set (average=1.00).	
NORMALIZED JOURNAL CITATION SCORE (NJCS)	1.00
The impact of the journal set normalized in relation to its sub-fields (average=1.00).	
FIELD NORMALIZED CITATION SCORE (NCSf)	1.40
CPP normalized in relation to the UoA "proj_roj_v5biomed" sub-field set (average=1.00).	
SUM OF FIELD NORMALIZED CITATION SCORE (Sum NCSf)	49.4
NCSf times Frac P.	
TOP 5 % (TOP5%)	10.71
Percentage of papers above the 95th citation percentile.	
VITALITY	1.14
Mean reference age normalized in relation to the sub-field set (average=1, higher=younger).	



BIBLIOMETRIC INDICATORS

PERCENTAGE NOT CITED PAPERS (PNC) **1e+001**

Percentage of not cited papers during the period.

HIRSCH INDEX (h-index) **19**

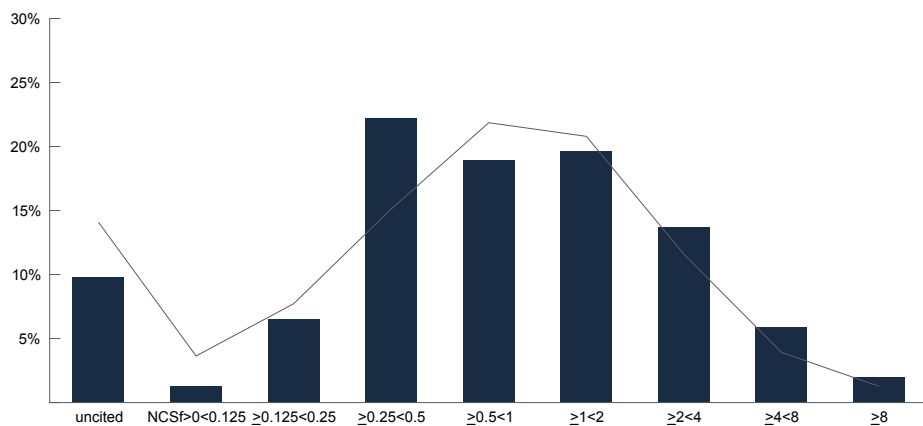
The h number papers that have at least h citations each.

AUTHOR MEAN (A_{Um}) **6.5**

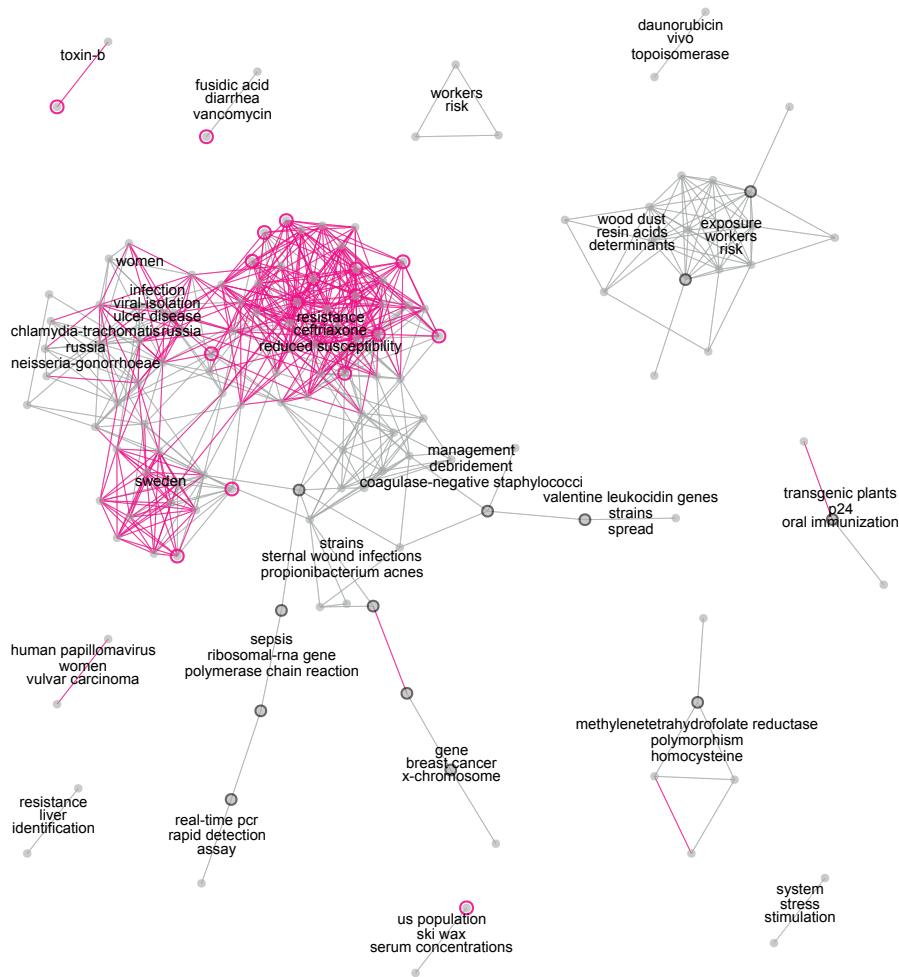
Mean number of authors per paper.

INTERNATIONAL COLLABORATION MEAN (IntCOLLm) **2.0**

Mean number of countries per paper.



Citation profile: The distribution of field normalized citation score for proj_rol_v5biomed (bars) compared with all papers attributed to Swedish Universities (line).



The map shows papers (nodes) published by proj_ro_l_v5biomed.
 Relations (edges) are based on bibliographic coupling.
 Most frequent keywords are displayed for groups of related papers.
 Papers with high field normalized citation score (>3) are marked with a pink border.
 Edges between publications with high vitality (>1.2) are drawn in pink.

MOST FREQUENT JOURNALS

- EUROSURVEILLANCE (14)
- APMIS (14)
- ANTIMICROB AGENTS CH (12)
- SEX TRANSM INFECT (7)
- J EUR ACAD DERMATOL (7)
- ACTA DERM-VENEREOL (7)
- J CLIN MICROBIOL (6)
- EUR J CLIN MICROBIOL (6)
- ANN OCCUP HYG (5)
- INT J STD AIDS (4)
- CLIN MICROBIOL INFEC (4)
- SEX TRANSM DIS (3)

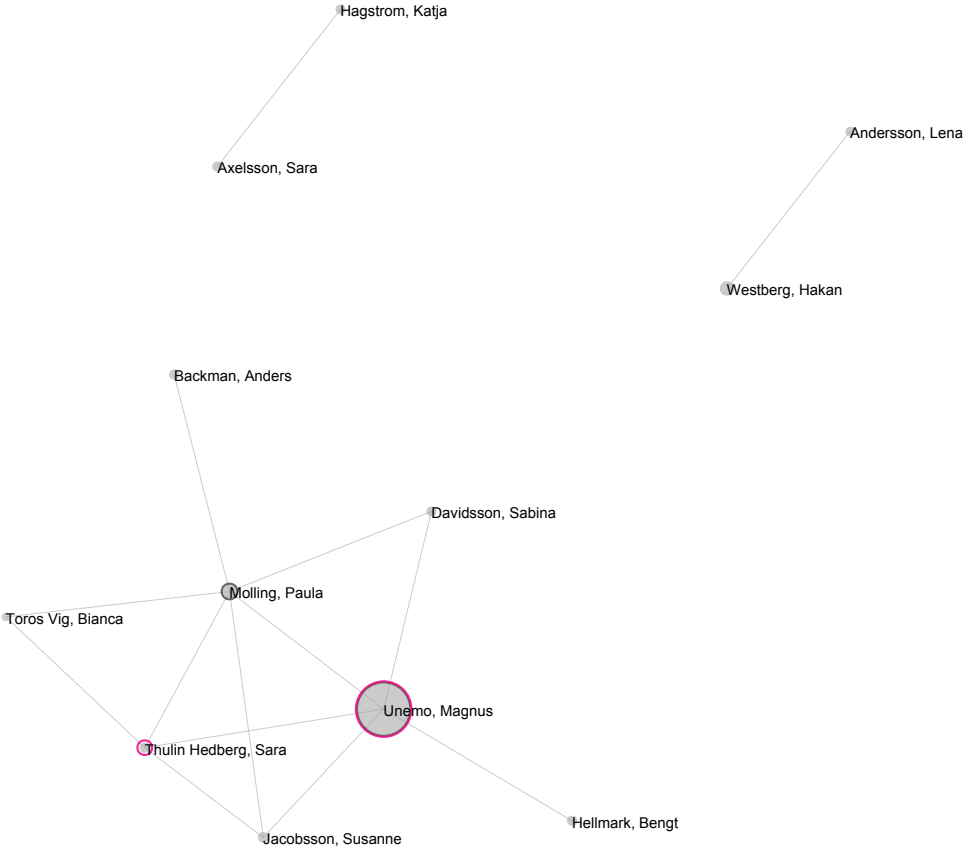
MOST FREQUENT COLLABORATORS

- OREBRO UNIV HOSP (187)
- OREBRO UNIV (45)
- UPPSALA UNIV (27)
- KAROLINSKA INST (23)
- UPPSALA HOSP UNIV (10)
- HOSP N NORWAY UNIV (10)
- UMEA UNIV (9)
- N CAROLINA UNIV (8)
- LUND UNIV (8)
- CTR DIS CONTROL & PREVENT (8)
- SWEDISH INST INFECT DIS CONTROL (7)
- PAVLOV STATE MED UNIV (7)

MOST FREQUENT SUBFIELDS

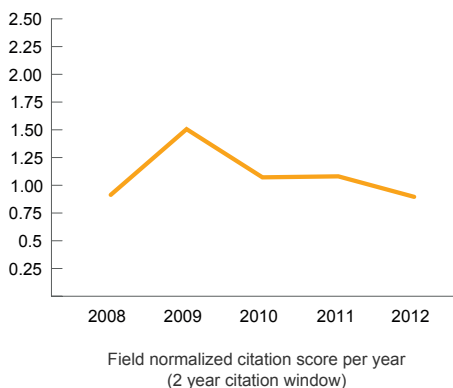
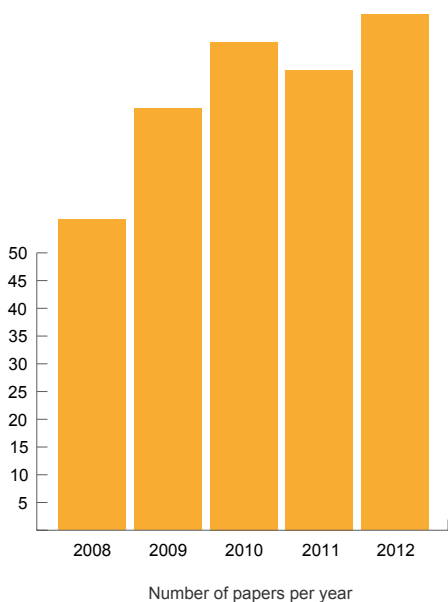
- MICROBIOLOGY (52)
- INFECTIOUS DISEASES (46)
- IMMUNOLOGY (20)
- PUBLIC, ENVIRONMENTAL & OCCUPATIONAL HEALTH (18)
- DERMATOLOGY (16)
- PHARMACOLOGY & PHARMACY (15)
- PATHOLOGY (14)
- ENVIRONMENTAL SCIENCES & ECOLOGY (7)
- TOXICOLOGY (6)
- ONCOLOGY (6)
- PEDIATRICS (4)
- RESEARCH & EXPERIMENTAL MEDICINE (3)

Region Örebro län
Subunit: RÖL Biomedicine
COLLABORATION NETWORK



Region Örebro län
 Subunit: RÖL Medicine
BIBLIOMETRIC INDICATORS

NUMBER OF PAPERS (P)	396
Number of papers (articles, letters and reviews) published by UoA "proj_rol_v5_medicine" during 2008-2012.	
NUMBER OF FRACTIONALIZED PAPERS (Frac P)	109.0
Sum of author fractionalized papers.	
CITATIONS PER PAPER (CPP)	9.3
Number of citations per paper.	
JOURNAL NORMALIZED CITATION SCORE (NCSj)	1.02
CPP normalized in relation to the UoA "proj_rol_v5_medicine" journal set (average=1.00).	
NORMALIZED JOURNAL CITATION SCORE (NJCS)	1.03
The impact of the journal set normalized in relation to its sub-fields (average=1.00).	
FIELD NORMALIZED CITATION SCORE (NCSf)	1.10
CPP normalized in relation to the UoA "proj_rol_v5_medicine" sub-field set (average=1.00).	
SUM OF FIELD NORMALIZED CITATION SCORE (Sum NCSf)	120.0
NCSf times Frac P.	
TOP 5 % (TOP5%)	5.84
Percentage of papers above the 95th citation percentile.	
VITALITY	1.06
Mean reference age normalized in relation to the sub-field set (average=1, higher=younger).	



BIBLIOMETRIC INDICATORS

PERCENTAGE NOT CITED PAPERS (PNC) **12**

Percentage of not cited papers during the period.

HIRSCH INDEX (h-index) **33**

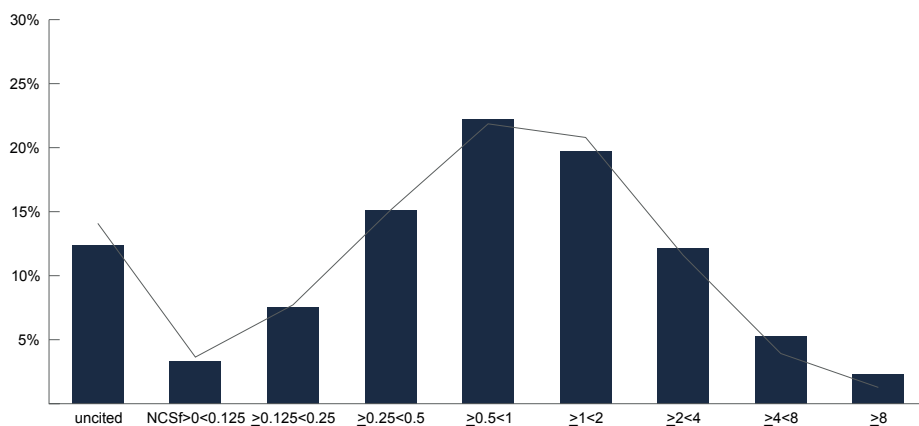
The h number papers that have at least h citations each.

AUTHOR MEAN (AUm) **6.0**

Mean number of authors per paper.

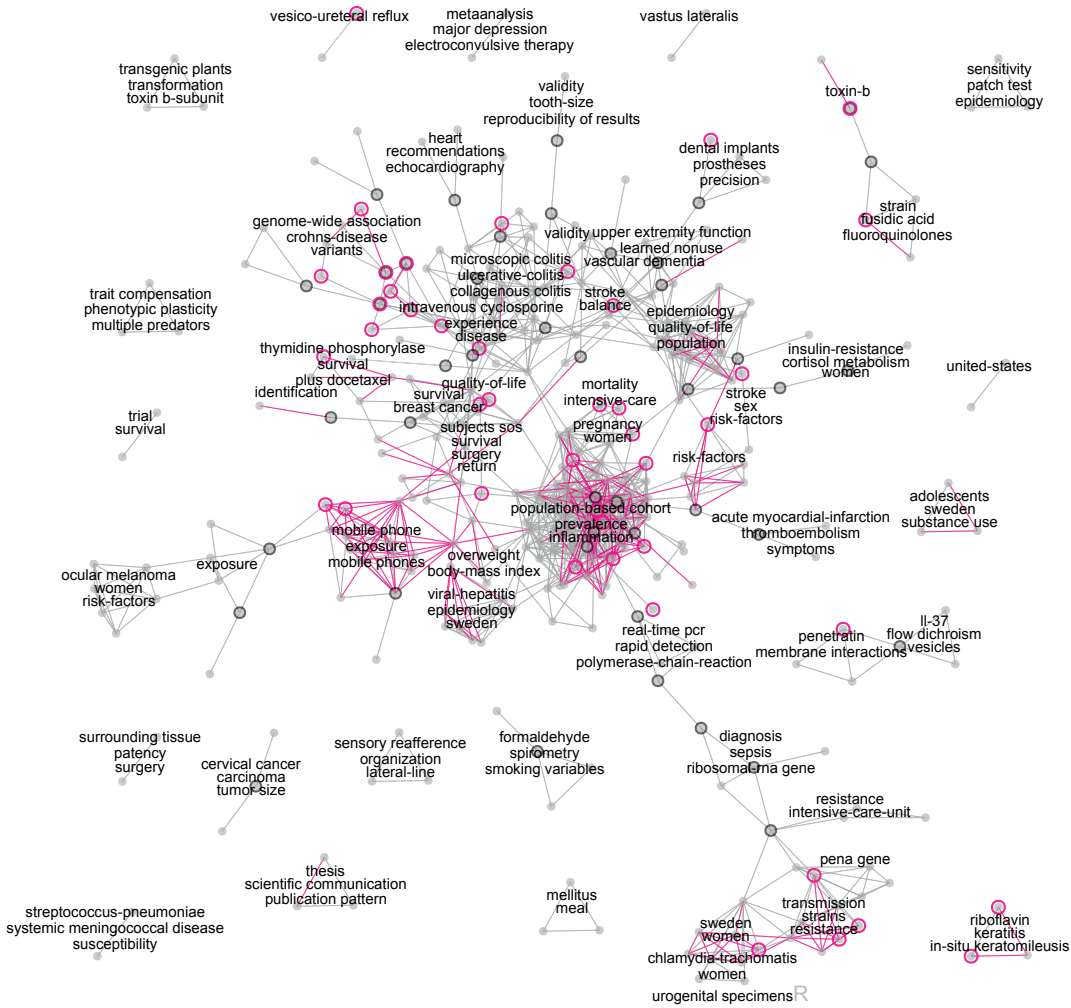
INTERNATIONAL COLLABORATION MEAN (IntCOLLm) **1.6**

Mean number of countries per paper.



Citation profile: The distribution of field normalized citation score for proj_rol_v5_medicine (bars) compared with all papers attributed to Swedish Universities (line).

Region Örebro län
 Subunit: RÖL Medicine
 PUBLICATION PROFILE



The map shows papers (nodes) published by proj_rol_v5_medicine.
 Relations (edges) are based on bibliographic coupling.
 Most frequent keywords are displayed for groups of related papers.
 Papers with high field normalized citation score (>3) are marked with a pink border.
 Edges between publications with high vitality (>1.2) are drawn in pink.

MOST FREQUENT JOURNALS

- INFLAMM BOWEL DIS (8)
- STROKE (7)
- SCAND J GASTROENTERO (7)
- APMIS (7)
- ALIMENT PHARM THER (7)
- ACTA ONCOL (7)
- ACTA PAEDIATR (6)
- SWED DENT J (5)
- SCAND J INFECT DIS (5)
- EUR J CLIN MICROBIOL (5)
- DIGEST LIVER DIS (5)
- BREAST CANCER RES TR (5)

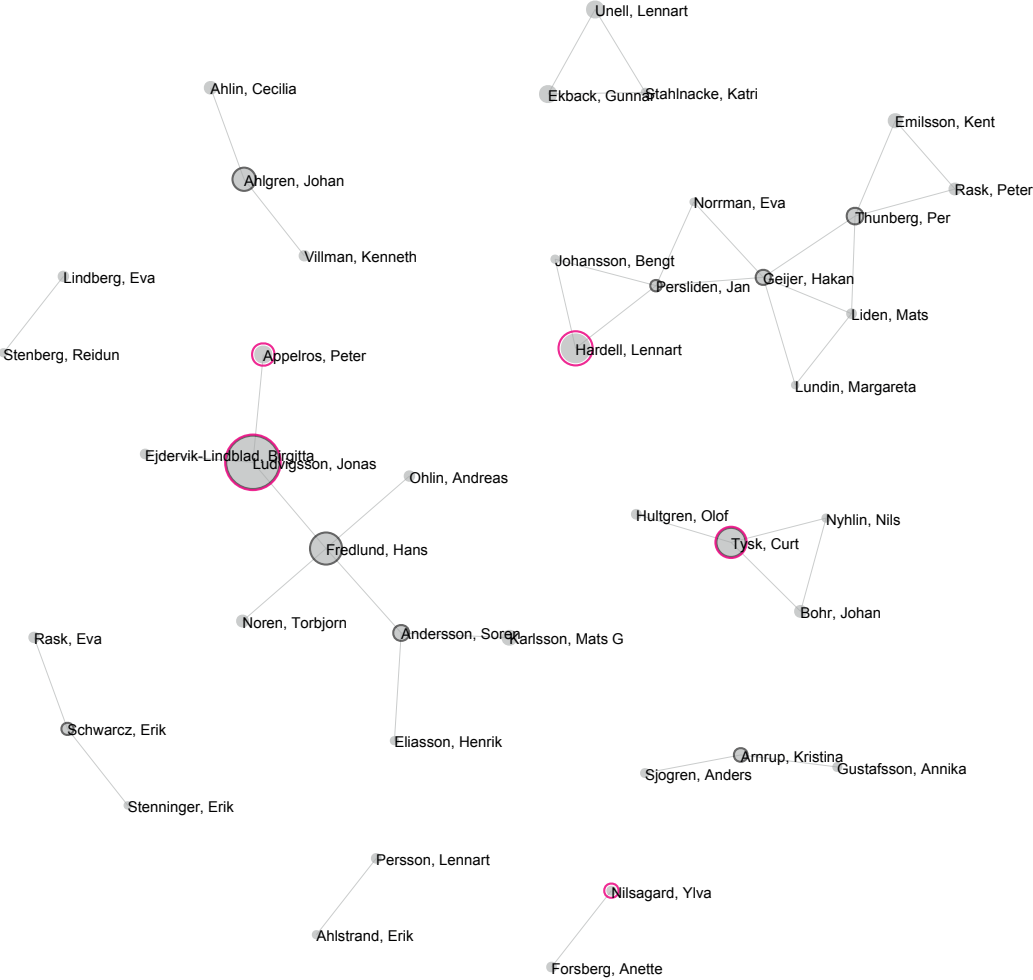
MOST FREQUENT COLLABORATORS

- OREBRO UNIV HOSP (369)
- KAROLINSKA INST (152)
- OREBRO UNIV (124)
- UPPSALA UNIV (72)
- KAROLINSKA UNIV HOSP (64)
- GOTHENBURG UNIV (50)
- LUND UNIV (48)
- HOSP UNIV (43)
- LINKOPING UNIV (37)
- UPPSALA HOSP UNIV (35)
- OREBRO CTY COUNCIL (32)
- UMEA UNIV (27)

MOST FREQUENT SUBFIELDS

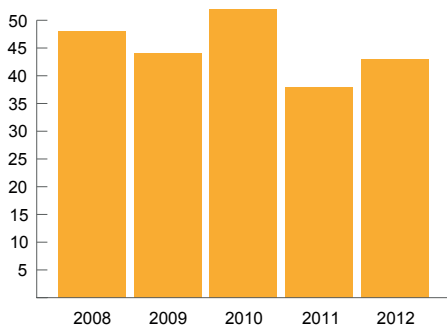
- GASTROENTEROLOGY & HEPATOLOGY (56)
- ONCOLOGY (49)
- INFECTIOUS DISEASES (34)
- CARDIOVASCULAR SYSTEM & CARDIOLOGY (32)
- MICROBIOLOGY (31)
- PUBLIC, ENVIRONMENTAL & OCCUPATIONAL HEALTH (28)
- DENTISTRY, ORAL SURGERY & MEDICINE (27)
- NEUROSCIENCES & NEUROLOGY (20)
- IMMUNOLOGY (17)
- PEDIATRICS (15)
- ENDOCRINOLOGY & METABOLISM (15)
- RADIOLOGY, NUCLEAR MEDICINE & MEDICAL IMAGING (14)

Region Örebro län
 Subunit: RÖL Medicine
 COLLABORATION NETWORK

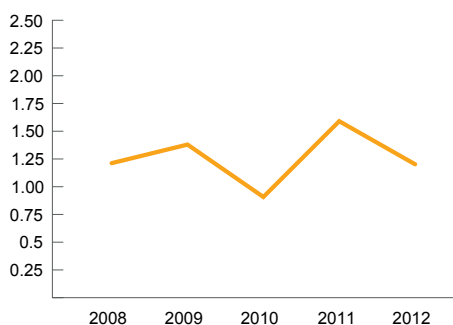


BIBLIOMETRIC INDICATORS

NUMBER OF PAPERS (P)	225
Number of papers (articles, letters and reviews) published by UoA "proj_rol_v5surgery" during 2008-2012.	
NUMBER OF FRACTIONALIZED PAPERS (Frac P)	59.0
Sum of author fractionalized papers.	
CITATIONS PER PAPER (CPP)	10.2
Number of citations per paper.	
JOURNAL NORMALIZED CITATION SCORE (NCSj)	1.08
CPP normalized in relation to the UoA "proj_rol_v5surgery" journal set (average=1.00).	
NORMALIZED JOURNAL CITATION SCORE (NJCS)	1.11
The impact of the journal set normalized in relation to its sub-fields (average=1.00).	
FIELD NORMALIZED CITATION SCORE (NCSf)	1.23
CPP normalized in relation to the UoA "proj_rol_v5surgery" sub-field set (average=1.00).	
SUM OF FIELD NORMALIZED CITATION SCORE (Sum NCSf)	72.5
NCSf times Frac P.	
TOP 5 % (TOP5%)	6.84
Percentage of papers above the 95th citation percentile.	
VITALITY	1.09
Mean reference age normalized in relation to the sub-field set (average=1, higher=younger).	



Number of papers per year



Field normalized citation score per year
(2 year citation window)

BIBLIOMETRIC INDICATORS

PERCENTAGE NOT CITED PAPERS (PNC) **8**

Percentage of not cited papers during the period.

HIRSCH INDEX (h-index) **27**

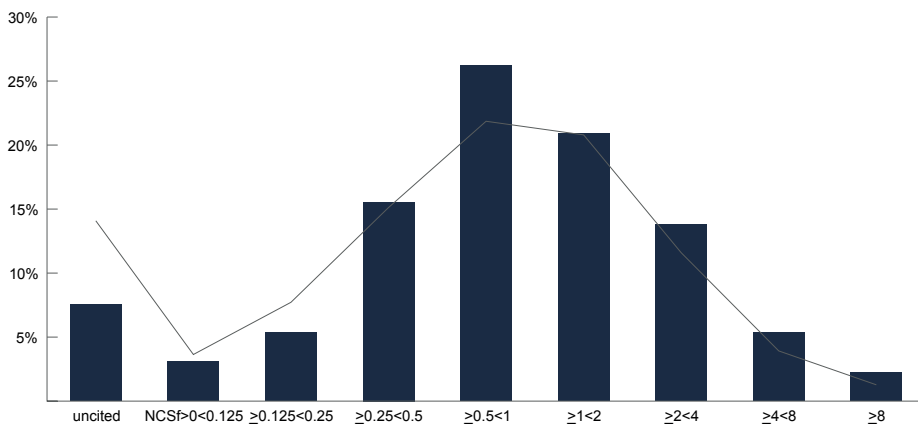
The h number papers that have at least h citations each.

AUTHOR MEAN (AUm) **23.1**

Mean number of authors per paper.

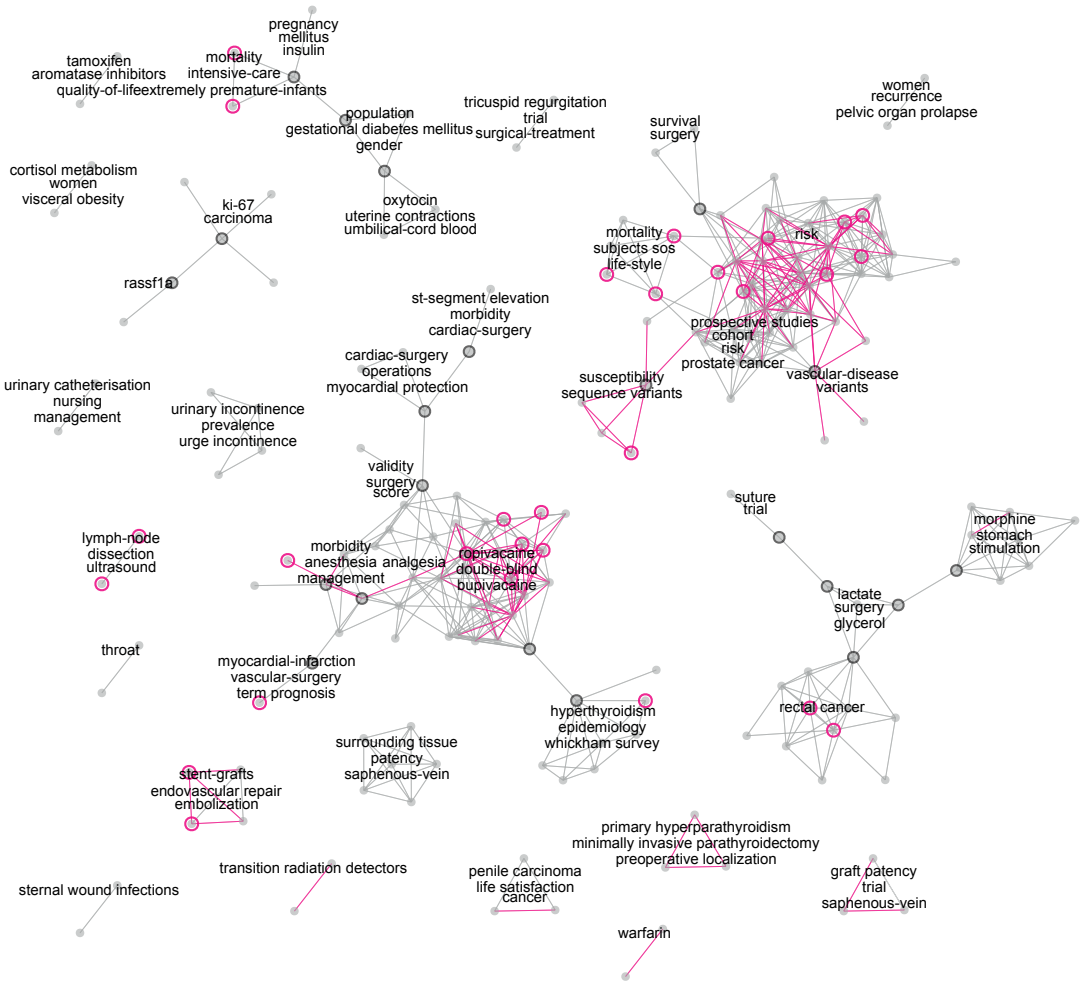
INTERNATIONAL COLLABORATION MEAN (IntCOLLm) **2.0**

Mean number of countries per paper.



Citation profile: The distribution of field normalized citation score for proj_rol_v5surgery (bars) compared with all papers attributed to Swedish Universities (line).

Region Örebro län
 Subunit: RÖL Surgery
 PUBLICATION PROFILE



The map shows papers (nodes) published by proj_ro_l_v5surgery. Relations (edges) are based on bibliographic coupling. Most frequent keywords are displayed for groups of related papers. Papers with high field normalized citation score (>3) are marked with a pink border. Edges between publications with high vitality (>1.2) are drawn in pink.

MOST FREQUENT JOURNALS

- ACTA ANAESTH SCAND (16)
- SCAND J UROL NEPHROL (9)
- EUR UROL (7)
- EUR J ENDOCRINOL (7)
- SCAND CARDIOVASC J (6)
- EUR J ANAESTH (5)
- COLORECTAL DIS (5)
- BRIT J CANCER (5)
- REGION ANESTH PAIN M (4)
- LANGENBECK ARCH SURG (4)
- J UROLOGY (4)
- CURR OPIN ANESTHESIO (4)

MOST FREQUENT COLLABORATORS

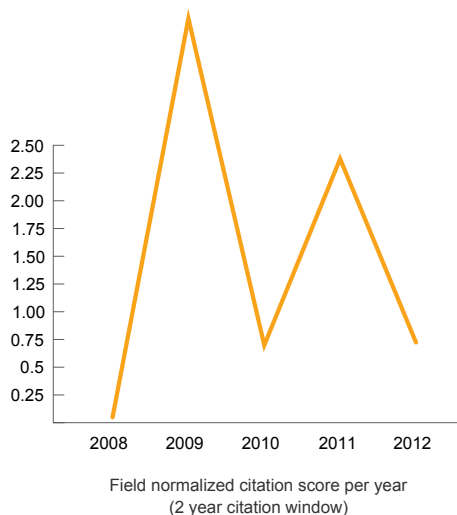
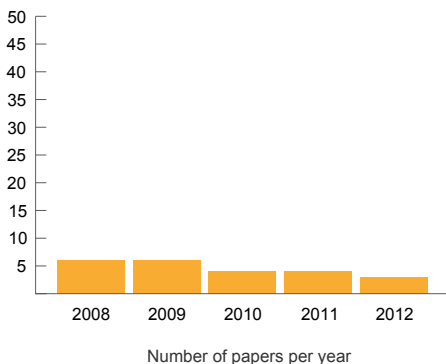
- OREBRO UNIV HOSP (199)
- KAROLINSKA INST (116)
- HOSP UNIV (51)
- OREBRO UNIV (42)
- HARVARD UNIV (42)
- KAROLINSKA UNIV HOSP (41)
- UPPSALA UNIV (40)
- LINKÖPING UNIV (34)
- LINKÖPING UNIV HOSP (26)
- GOTHENBURG UNIV (25)
- SAHLGREN'S UNIV HOSP (24)
- UPPSALA HOSP UNIV (23)

MOST FREQUENT SUBFIELDS

- ANESTHESIOLOGY (41)
- SURGERY (37)
- ONCOLOGY (28)
- UROLOGY & NEPHROLOGY (26)
- CARDIOVASCULAR SYSTEM & CARDIOLOGY (21)
- ENDOCRINOLOGY & METABOLISM (15)
- GASTROENTEROLOGY & HEPATOLOGY (13)
- RESPIRATORY SYSTEM (10)
- PUBLIC, ENVIRONMENTAL & OCCUPATIONAL HEALTH (10)
- GENERAL & INTERNAL MEDICINE (10)
- OBSTETRICS & GYNECOLOGY (9)
- NUTRITION & DIETETICS (8)

BIBLIOMETRIC INDICATORS

NUMBER OF PAPERS (P)	23
Number of papers (articles, letters and reviews) published by UoA "proj_rol_v5_sidr" during 2008-2012.	
NUMBER OF FRACTIONALIZED PAPERS (Frac P)	7.7
Sum of author fractionalized papers.	
CITATIONS PER PAPER (CPP)	4.7
Number of citations per paper.	
JOURNAL NORMALIZED CITATION SCORE (NCSj)	0.95
CPP normalized in relation to the UoA "proj_rol_v5_sidr" journal set (average=1.00).	
NORMALIZED JOURNAL CITATION SCORE (NJCS)	1.02
The impact of the journal set normalized in relation to its sub-fields (average=1.00).	
FIELD NORMALIZED CITATION SCORE (NCSf)	1.96
CPP normalized in relation to the UoA "proj_rol_v5_sidr" sub-field set (average=1.00).	
SUM OF FIELD NORMALIZED CITATION SCORE (Sum NCSf)	15.0
NCSf times Frac P.	
TOP 5 % (TOP5%)	4.57
Percentage of papers above the 95th citation percentile.	
VITALITY	1.04
Mean reference age normalized in relation to the sub-field set (average=1, higher=younger).	



Region Örebro län
 Subunit: RÖL Disability Science (SIDR)
BIBLIOMETRIC INDICATORS

PERCENTAGE NOT CITED PAPERS (PNC) **22**

Percentage of not cited papers during the period.

HIRSCH INDEX (h-index) **6**

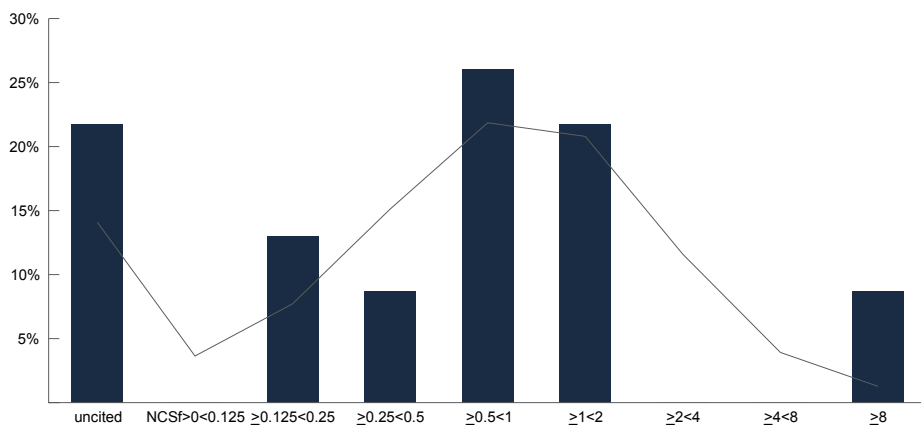
The h number papers that have at least h citations each.

AUTHOR MEAN (A_{um}) **4.2**

Mean number of authors per paper.

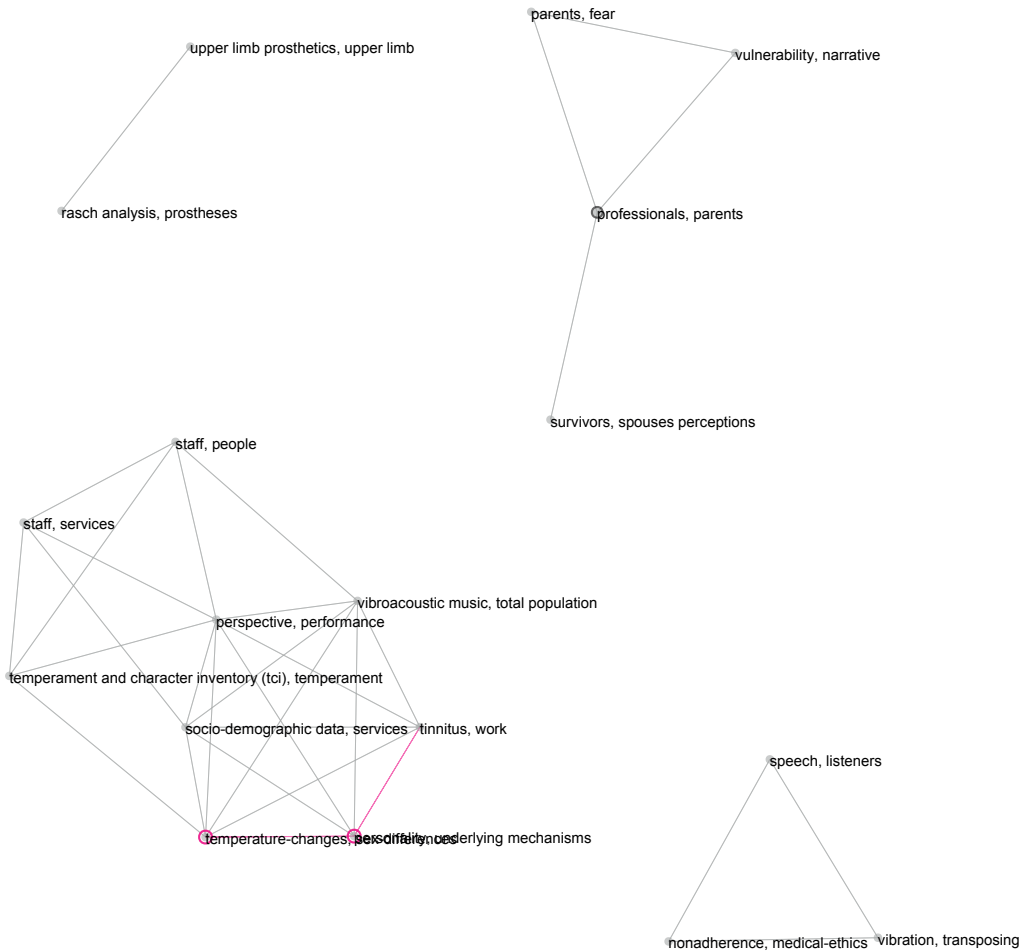
INTERNATIONAL COLLABORATION MEAN (IntCOLL_m) **2.0**

Mean number of countries per paper.



Citation profile: The distribution of field normalized citation score for proj_rol_v5_sidr (bars) compared with all papers attributed to Swedish Universities (line).

Region Örebro län
 Subunit: RÖL Disability Science (SIDR)
PUBLICATION PROFILE



The map shows papers (nodes) published by proj_rol_v5_sidr. Relations (edges) are based on bibliographic coupling. Most frequent keywords are displayed for groups of related papers. Papers with high field normalized citation score (>3) are marked with a pink border. Edges between publications with high vitality (>1.2) are drawn in pink.

MOST FREQUENT JOURNALS

- J CHILD HEALTH CARE (2)
- INT J AUDIOL (2)
- WORK (1)
- RES DEV DISABIL (1)
- RES AUTISM SPECT DIS (1)
- PSYCHOL MUSIC (1)
- PROSTHET ORTHOTICS INT (1)
- PROSTHET ORTHOT INT (1)
- PERS INDIV DIFFER (1)
- MUSIC SCI (1)
- J REHABIL RES DEV (1)
- J REHABIL MED (1)

MOST FREQUENT COLLABORATORS

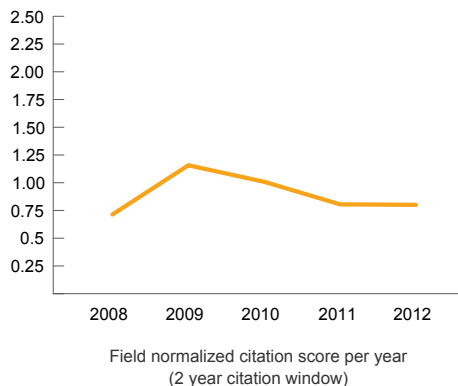
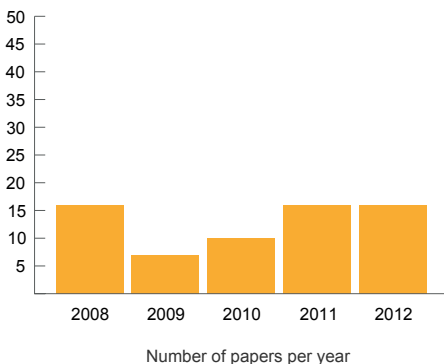
- OREBRO UNIV (23)
- OREBRO UNIV HOSP (18)
- OREBRO CTY COUNCIL (5)
- UPPSALA UNIV (2)
- LUND UNIV (2)
- LINKOPING UNIV (2)
- KARLSTAD UNIV (2)
- HOSP UNIV (2)
- HEDMARK UNIV COLL (2)
- BODO UNIV COLL (2)
- VRIJE UNIV AMSTERDAM (1)
- UPMC (1)

MOST FREQUENT SUBFIELDS

- REHABILITATION (6)
- PSYCHOLOGY (6)
- NURSING (6)
- PSYCHIATRY (3)
- PEDIATRICS (3)
- OTORHINOLARYNGOLOGY (3)
- ORTHOPEDICS (2)
- MUSIC (2)
- EDUCATION & EDUCATIONAL RESEARCH (2)
- AUDIOLOGY & SPEECH-LANGUAGE PATHOLOGY (2)
- SPORT SCIENCES (1)
- SOCIAL SCIENCES - OTHER TOPICS (1)

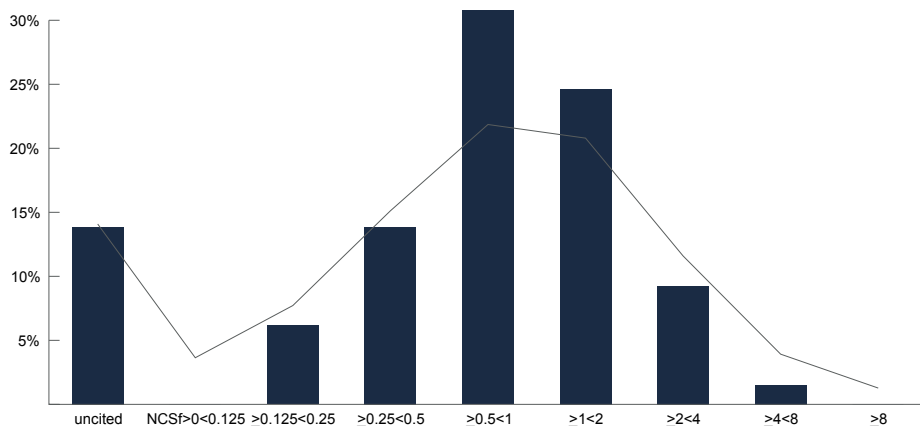
BIBLIOMETRIC INDICATORS

NUMBER OF PAPERS (P)	65
Number of papers (articles, letters and reviews) published by UoA "proj_roj_v5nursing_sci" during 2008-2012.	
NUMBER OF FRACTIONALIZED PAPERS (Frac P)	18.3
Sum of author fractionalized papers.	
CITATIONS PER PAPER (CPP)	5.4
Number of citations per paper.	
JOURNAL NORMALIZED CITATION SCORE (NCSj)	0.98
CPP normalized in relation to the UoA "proj_roj_v5nursing_sci" journal set (average=1.00).	
NORMALIZED JOURNAL CITATION SCORE (NJCS)	0.87
The impact of the journal set normalized in relation to its sub-fields (average=1.00).	
FIELD NORMALIZED CITATION SCORE (NCSf)	0.87
CPP normalized in relation to the UoA "proj_roj_v5nursing_sci" sub-field set (average=1.00).	
SUM OF FIELD NORMALIZED CITATION SCORE (Sum NCSf)	16.0
NCSf times Frac P.	
TOP 5 % (TOP5%)	2.65
Percentage of papers above the 95th citation percentile.	
VITALITY	1.01
Mean reference age normalized in relation to the sub-field set (average=1, higher=younger).	



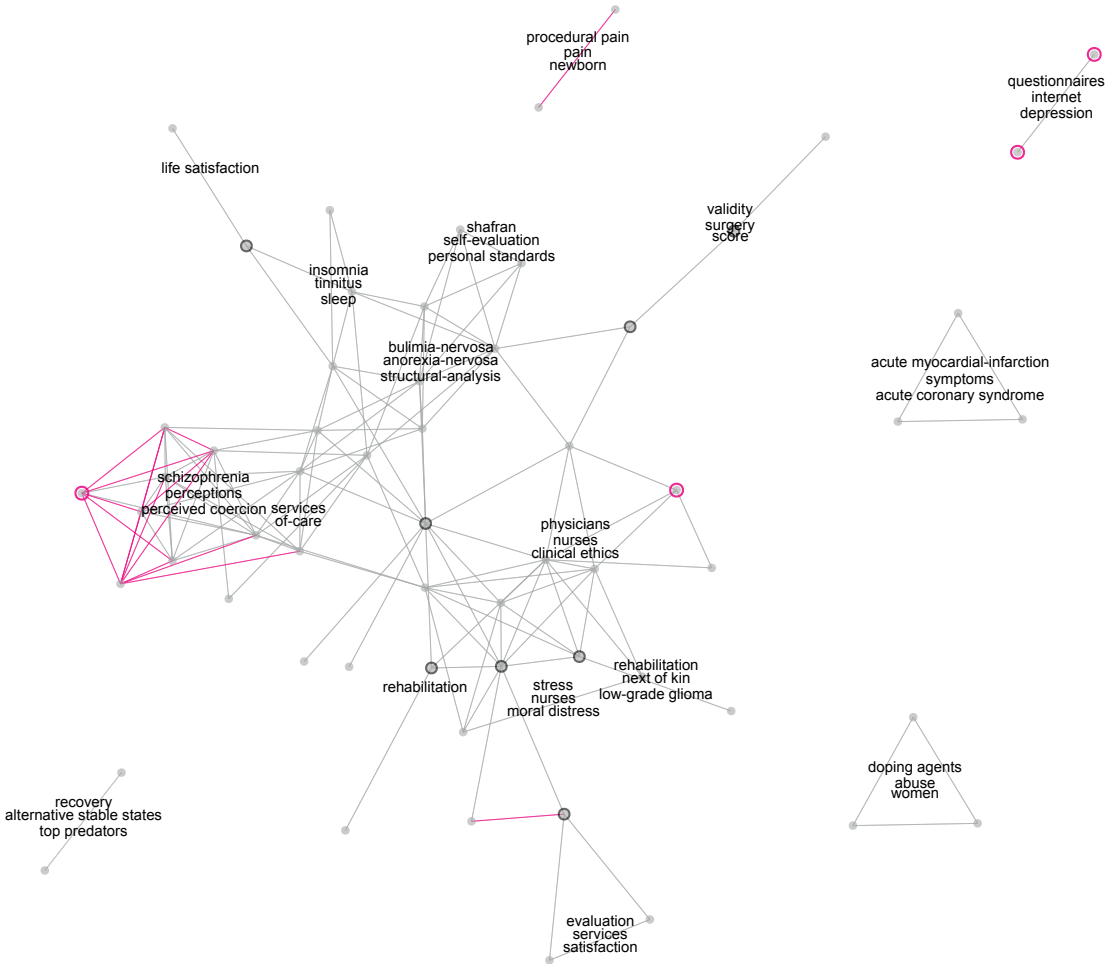
Region Örebro län
 Subunit: RÖL Nursing Science
BIBLIOMETRIC INDICATORS

PERCENTAGE NOT CITED PAPERS (PNC)	14
Percentage of not cited papers during the period.	
HIRSCH INDEX (h-index)	11
The h number papers that have at least h citations each.	
AUTHOR MEAN (A_{Um})	5.7
Mean number of authors per paper.	
INTERNATIONAL COLLABORATION MEAN (IntCOLLm)	2.6
Mean number of countries per paper.	



Citation profile: The distribution of field normalized citation score for proj_rol_v5nursing_sci (bars) compared with all papers attributed to Swedish Universities (line).

Region Örebro län
 Subunit: RÖL Nursing Science
PUBLICATION PROFILE



The map shows papers (nodes) published by proj_rol_v5nursing_sci. Relations (edges) are based on bibliographic coupling. Most frequent keywords are displayed for groups of related papers. Papers with high field normalized citation score (>3) are marked with a pink border. Edges between publications with high vitality (>1.2) are drawn in pink.

MOST FREQUENT JOURNALS

- EUR EAT DISORD REV (4)
- J CLIN NURS (3)
- SCAND J OCCUP THER (2)
- SCAND J CARING SCI (2)
- PRIM CARE RESP J (2)
- NURS ETHICS (2)
- NORD J PSYCHIAT (2)
- J MED ETHICS (2)
- J EVAL CLIN PRACT (2)
- INT J CARDIOL (2)
- EUR ADDICT RES (2)
- BRIT J PSYCHIAT (2)

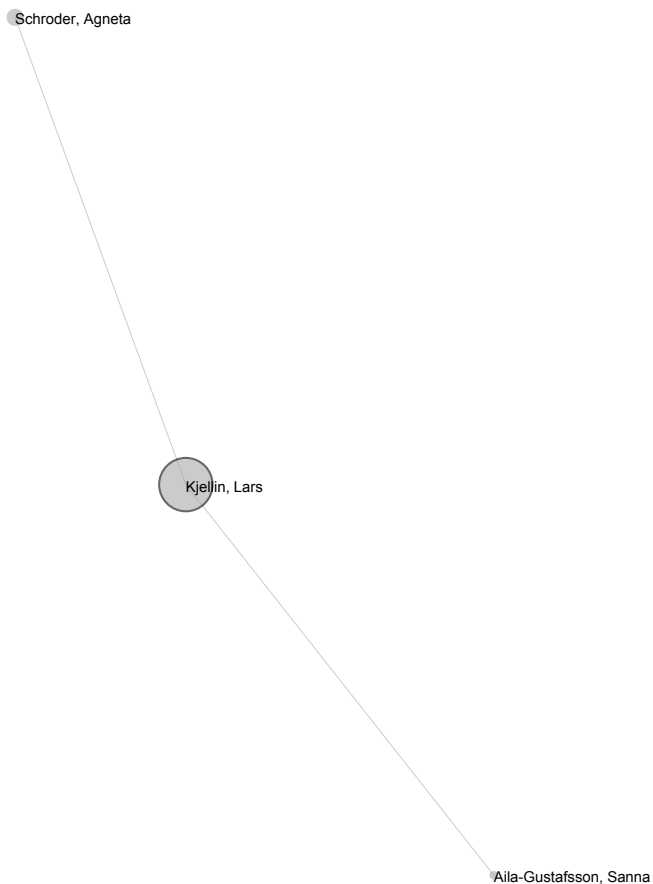
MOST FREQUENT COLLABORATORS

- OREBRO UNIV (65)
- OREBRO UNIV HOSP (26)
- KAROLINSKA INST (16)
- UPPSALA UNIV (14)
- OREBRO CTY COUNCIL (11)
- TECH UNIV DRESDEN (10)
- MED UNIV SOFIA (7)
- JONKOPING UNIV (7)
- CHARLES UNIV PRAGUE (7)
- LINKOPING UNIV (6)
- HOSP PSYCHIAT (6)
- GRANADA UNIV (6)

MOST FREQUENT SUBFIELDS

- PSYCHIATRY (18)
- NURSING (11)
- PSYCHOLOGY (9)
- GENERAL & INTERNAL MEDICINE (7)
- HEALTH CARE SCIENCES & SERVICES (5)
- RESPIRATORY SYSTEM (4)
- SUBSTANCE ABUSE (3)
- REHABILITATION (3)
- PEDIATRICS (3)
- MEDICAL INFORMATICS (3)
- CARDIOVASCULAR SYSTEM & CARDIOLOGY (3)
- BIOMEDICAL SOCIAL SCIENCES (3)

Region Örebro län
Subunit: RÖL Nursing Science
COLLABORATION NETWORK



Questions for the Evaluation

This report presents the background bibliometric indicators for the analysis based on publication data from 2008 – 2014. The main question to be answered by the analysis concerns the performance of units in two dimensions: 1) *production performance* (*productivity of research*); and 2) *citation performance* (“*quality*” of research)¹. Besides, there is also an interest in how the researchers build research networks in national and international collaborations. Which institutions (organisations) are the most frequent collaborators with ORU researchers? How do ORU researchers relate to each other at the home arena?

The bibliometric dataset contains of four types of documents²:

- i. **The manual** with explanations background for each of the bibliometric indicators and with descriptions of the methods for producing indicators.
- ii. **Bibliometric indicators per Unit of Evaluation**, which provide a comprehensive analysis of the unit’s performance (including all the relevant subunits), publishing profile, publication map and collaboration map.
- iii. **Bibliometric indicators per Subunit**, which give information and analysis by subunit.
- iv. **Result tables**, which provide information at the individual level with indicators based partly on the Web of Science, and partly on local DiVA for coverage of most types of scientific publishing. AUID or ORU-ID is presented in Annex F.

Output and Impact of Research

A large part of the bibliometric evaluation is based mainly on a quantitative analysis of scientific articles in international journals and serials processed for the Web of Science versions of the Citation Indices (SCI, SSCI and A&HCI). Therefore, that part of the evaluation is not trying to cover all publications from the units of researchers. Instead, the focus is put on contribution in scientific journals which are indexed with their references and thereby making it possible to measure impact and use by colleagues all over the world.

The Web of Science database represents roughly 90 per cent of the most prestigious journals and serials in major fields of science. The database was set up in the early 1960s by an independent research-oriented company in order to meet the needs of modern science in library and information services. Evidently, the database is also a valuable asset for evaluative bibliometrics as it indexes the references in articles and connects references to articles (citations).

With the Web of Science it is known what types of material are included, scholarly (refereed) journals and no more. With all other databases (except for Scopus) many different types of data are included, which makes it less possible to judge whether the impact is coming from the scholarly side or from the non-professional side. As will be dwelled upon in the theoretical chapter, scholarly contributions cannot be judged by stakeholder groups but has to be scrutinised in a peer process before it can be regarded as accepted (and later on as core) knowledge.³

¹ See Cole & Cole (1973) chapter 2 on the question whether citations is a viable proxy for quality.

² N.B.: The figures for the indicator Per cent Not Cited (PNC) differ in the respective analyses due do shifting counting methods for the indicator. Two different methods have been applied, with or without fractionalisation. Tables are based on author fractions of papers and the UoE-outputs are based on full count. Unfortunately, there is also another difference. The bar diagrams in the UoE-outputs (with visualisation maps) are based on all papers from 2008 up until 2014. The latter is a mishap based on a bug in the BMX-program, and the bars show, in most cases, considerably higher levels for uncited papers.

³ Cf. Cole & Cole (1973), see especially chapter 2.

Another consideration that has guided the evaluation approach is a requirement to make use of *multiple indicators* in order to describe the complex patterns of publications from research programs performed by universities and research institutes. The study makes use of several methods, each deepening the understanding generated by the publication output from a different angle of incidence. No single index should be considered in isolation.

Publications and citations form the basis of indicators used. *Citations* are a direct measure of impact; however, they measure the quality of an article only indirectly and imperfectly. Whilst we can undoubtedly measure the impact of a research unit by looking at the number of times its publications have been cited; there are limitations. Citation-based methods enable us to identify excellence in research; these methods cannot, with certainty, identify the absence of excellence (or quality).

Bibliometric Peer Review

Why bibliometric peer review? The reason is simple and alludes on everyday scholarly behaviour; every time a scientific colleague uses an article produced by a researcher (under study) it comprises a valuation of the article (“a vote”); is it valuable and instrumental for that specific peer? The stream of articles is thus forming a base for calculations on the number of such collegial decisions made by the respective researchers. Together, these decision processes build a large amount of material that can be normalised and calculated so that it can form the basis for a scientific evaluation. This valuation is based on systematic methods and does not lend itself to random factors like selection of assessors or alike. Bibliometric peer review is the only way to implement peer review in a way that is stable over time, comparable over time, and should be fair and provide interpretable results. Bornmann & Marx (2013) call it *the wisdom of crowds* and this wisdom can only be held by the large group of peers. In the words of Thomas Kuhn: “For a scientist, the solution of a difficult conceptual or instrumental puzzle is a principal goal. His success in that endeavour is rewarded through recognition by other members of his professional group and by them alone.” (Kuhn, 1970, p.21).

This study is based on a quantitative analysis of scientific articles published in journals and serials processed for the Web of Science (WoS) versions of the Science Citation Index and associated citation indices: the Science Citation Index (SCI), the Social Science Citation Index (SSCI), and the Arts & Humanities Citation Index (A&HCI). Using advanced bibliometric techniques, it assesses the publication output and citation impact of research performed within the areas covered.

Impact, as measured by citations, is compared with worldwide reference values. Citations to articles until August, 2014 are used for the analysis. The investigations reported here use a decreasing time-window from the year of publication until end of 2014. However, some of the indicators are used for time-series and in these cases a fixed two year citation window is applied. Publications from year 2008 receive citations until 2010; publications from 2009 receive citations until 2011 and so on.

Bibliometric Performance

A starting point for bibliometrics (publication counting) is not only to measure publications in an efficient way, but that its results provide relevant information concerning research-scope and quality. All this provided that reasonably accurate normalisations are undertaken. Thus, when we talk about recognition from colleagues as an indicator, we realise immediately that conditions differ between areas of research due to number of researchers etc. This enforces a normalisation of citations to a reference value (mean or median) of demarcated areas. The present bibliometric peer review apply internationally recognised methods for normalisation of publication data.

But one problem remains. How should the citations be compared between people who publish different amounts? A single article from researcher A is to be compared with researcher B who is

highly productive, but does not get as high citation rate per publication. Which of these people have greater visibility and impact on colleagues? The volume of production must be taken into account and therefore we need size-dependent indicators. This is made possible by a method, the waring method, which mathematically-statistically calculates the average production for a population (including those who do not publish). The indicator is named Field Adjusted Production (FAP). The procedure is briefly described in the following section.

Field Adjusted Production

Field Adjusted Production (FAP) is a measure that includes a method for normalisation of production of articles against Nordic reference values. The method for FAP makes it possible to use citations as the basis and is thus a necessary first step in the percentile model presented below.

The focus is on attention from colleagues around the world. The idea is that only an article production aimed at the ongoing research fronts can affect international colleagues' research. Arguably the only way to assess the quality of research is this international aspect of the research system. The opportunity to judge the quality of different contributions is limited to colleagues close to the research front who have their own experiences of ongoing research in the particular field under study. These researchers give their "vote" when they use the cited work.

Data and Approach

All Web of Science articles during the period of 2008 – 2014 produced by the academic staff employed at Örebro University (on January 1, 2015) have been searched, regardless of where the member of staff was located before the date of January 1, 2015.

Each journal in which the researchers published a paper has a reference value that depends on the area's weighting based on normal production from Nordic university researchers. Articles in journals where scientists in the field publish less often means a larger contribution, while an article in a journal where researchers typically have a more frequent production represents a relatively small contribution. This is an effect of normalisation. The method is called Field Adjusted Production (FAP).

The last step in the analysis is to calculate the number of citations per article and the indicators based on citations. Note that self-citations, based on the first author's name, are removed from the analysis.

The Percentile Model

Relative citation indicators – based on averages – were introduced already in the 1980s, but since then not much has happened except for different ways to calculate the indicator (Lundberg, 2006). The use of size-independent indicators continued to be the normal procedure up until quite recently. Indicators, where the number of publications is of no importance for the bibliometric value, has one negative feature as it overlooks constant good performances and high visibility of researchers. A researcher who produced highly cited articles during the period of 2008 – 2010 will be none the worse as a consequence of publishing a number of non-cited articles in 2011 and 2012. But, in our view, the amount of articles and the level reached in the first period will not diminish. When assessing a group of researchers and performances we should therefore add performances to each other's instead of creating an average of all articles where there is a highly skewed distribution in the background.

The basis for percentiles is that each article is ranked, based on its citations, within their respective fields of science, defined by the subject classes (about 250) listed in Web of Science, and is divided into percentile groups (the 1 per cent, 5 per cent, 10 per cent maximum rated, and so on). Measurements based on percentiles have the advantage that they are not affected by biases in the distribution of citations (Rousseau, 2005). In some disciplines, there are a few

publications with a very large number of citations pulling up the average (Seglen, 1992, 1998), so that 70 per cent of articles in the field are below average citation-wise.

The percentile indicator is “translated” to a point score for each article, depending on whether an article belongs to the most cited per cent or belongs to another percentile group. Those in the Top 1 % are awarded 100 points, the Top 5 % get 20 points, and so on (see Table 1). An article that belongs to the Top 50 % least cited gets 1 point, implicating that a researcher can never lose points by publishing an article during the period under study.

Table 1: Points given per percentile group.

Percentile (per cent)	Points
0.01	100
0.05	20
0.10	10
0.25	4
0.50	2
1.00	1

The number of points that each article thus obtains is adjusted by the FAP-method for field adjustment of production (Sandström & Sandström 2009). This is done in order to compensate for differences in scientific production behaviour between research areas. All journals in the Web of Science have been categorized into five areas (Applied Sciences, Natural Sciences, Health Sciences, Economic & Social Sciences, and Arts & Humanities). Using the waring method, it is then possible to create a FAP-factor (Sandström et al. 2011) which can be multiplied with the citation points. The measure we use is thus a composite measure of a single value expressing productivity (number of papers) and level of citations (quality). The advantage, compared to other similar measures, such as the h-index, is that this measure is designed to be used over and between all areas of science as is the case when we want to compare performance at the university level and across different faculty areas.

The researchers identified according to the methodology described above, receive a score based on article fractions and their citation based points. As this has been used for the whole Swedish research community we have a ranking of all 48,000 Swedish researchers during the four-year period. This gives a basis for benchmarking in order to specify where a specific group of researchers is located in the Swedish distribution over percentiles of performance (further information on this method see Sandström & Wold 2015).

Table 2 shows the limit values for different percentile groups applicable for the period 2008 – 2012:

Table 2: Level values for each percentile group in the percentile model.

Top 1 %	49.5
Top 5 %	17.3
Top 10 %	9.5
Top 25 %	3.4
Top 50 %	1.125

DiVA and the Norwegian Model

Web of Science provides publications in international journals indexed by Thomson Reuters. In addition to this, there are a number of academic journals ($\approx 10,000$) and other publishing channels (books, chapters in books, proceeding papers etc.) that publish scientific literature, but not covered by WoS. Many universities have in recent years established repositories of all publications issued by its employees. At Örebro University the DiVA repository is applied and this data set has been used for a bibliometric analysis based on the methods laid forward in the so called Norwegian model.

There are problems with data quality, since the DiVA repository is based on self-reporting (researchers record the material themselves and this is still to some extent voluntary) which to some extent implicates erroneous registrations. Errors include whether the material is refereed or non-refereed, the journal's ISSN number, document category, etc. Quite frequently there are in these respects incorrect data, however, they can be used as a companion to the WoS data.

The following analysis of the DiVA data is based on the Norwegian model's principles; e.g. for weighting of publications into two levels, Level 1 and Level 2. The latter includes the approximately 20 per cent of the "best" journal publications and are therefore awarded a higher score. The scores for different publication types are shown in Table 3.

Table 3: Scores given in the Norwegian model.

	Level 1	Level 2
Journal article	1	3
Chapter in book (incl. conference proceedings published by publishing companies).	0.7	1
Book (publishing house)	5	8

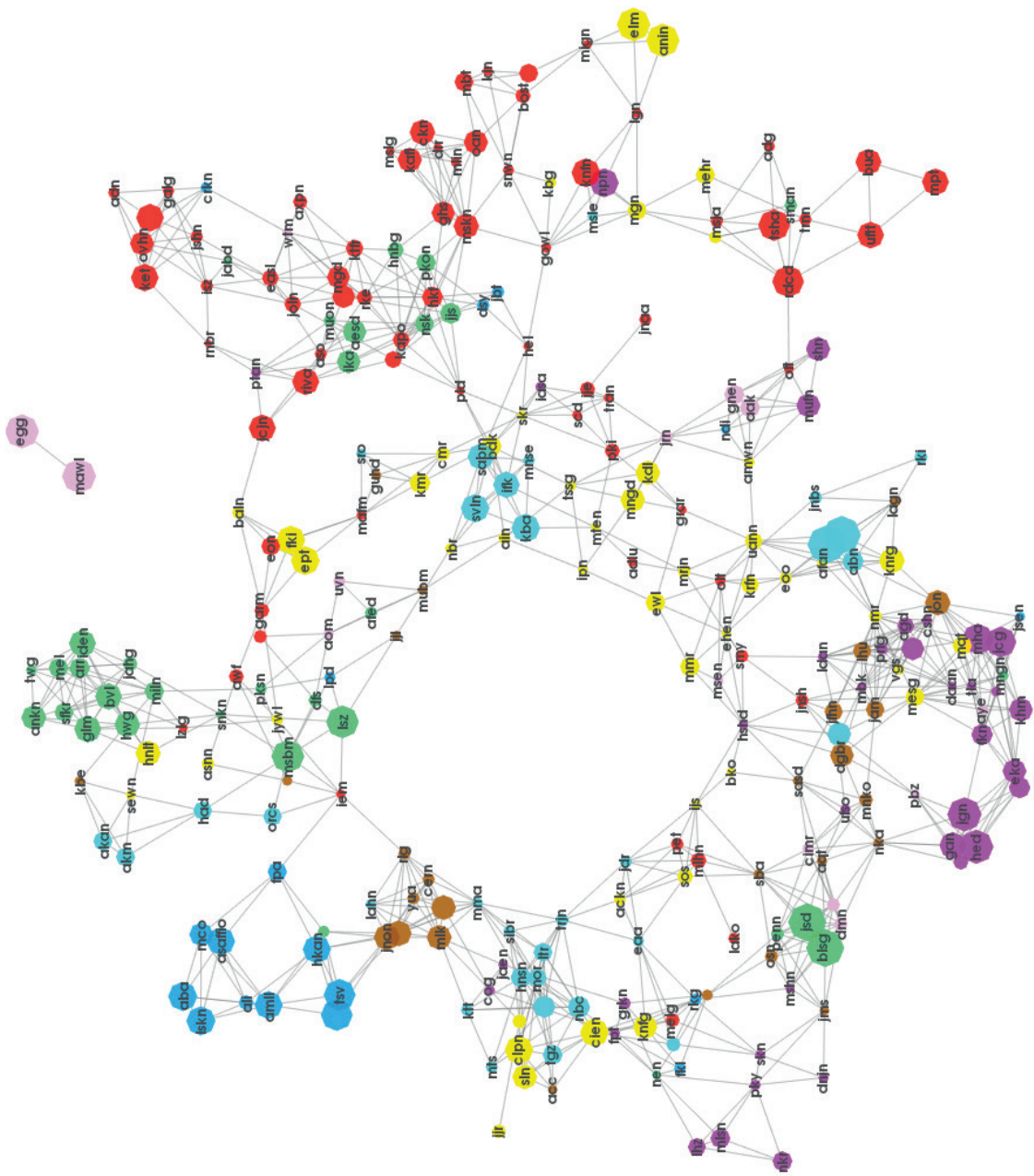
The Norwegian model takes into account the number of authors per publication. If there are three authors publishing an article in a Level 2 journal then each author receives 1 publishing point. If the same authors published in a level 1 journal, they would each receive 0.33 publishing points.

The Norwegian authority list has been used, but it has been enlarged by journals that are considered academic and with a referee system to the data base *Ulrich's Periodicals*. Overall, this analysis covers about 30,000 periodicals and about one thousand publishing houses.

Networks of Papers

In this section five maps or visualisations are presented:

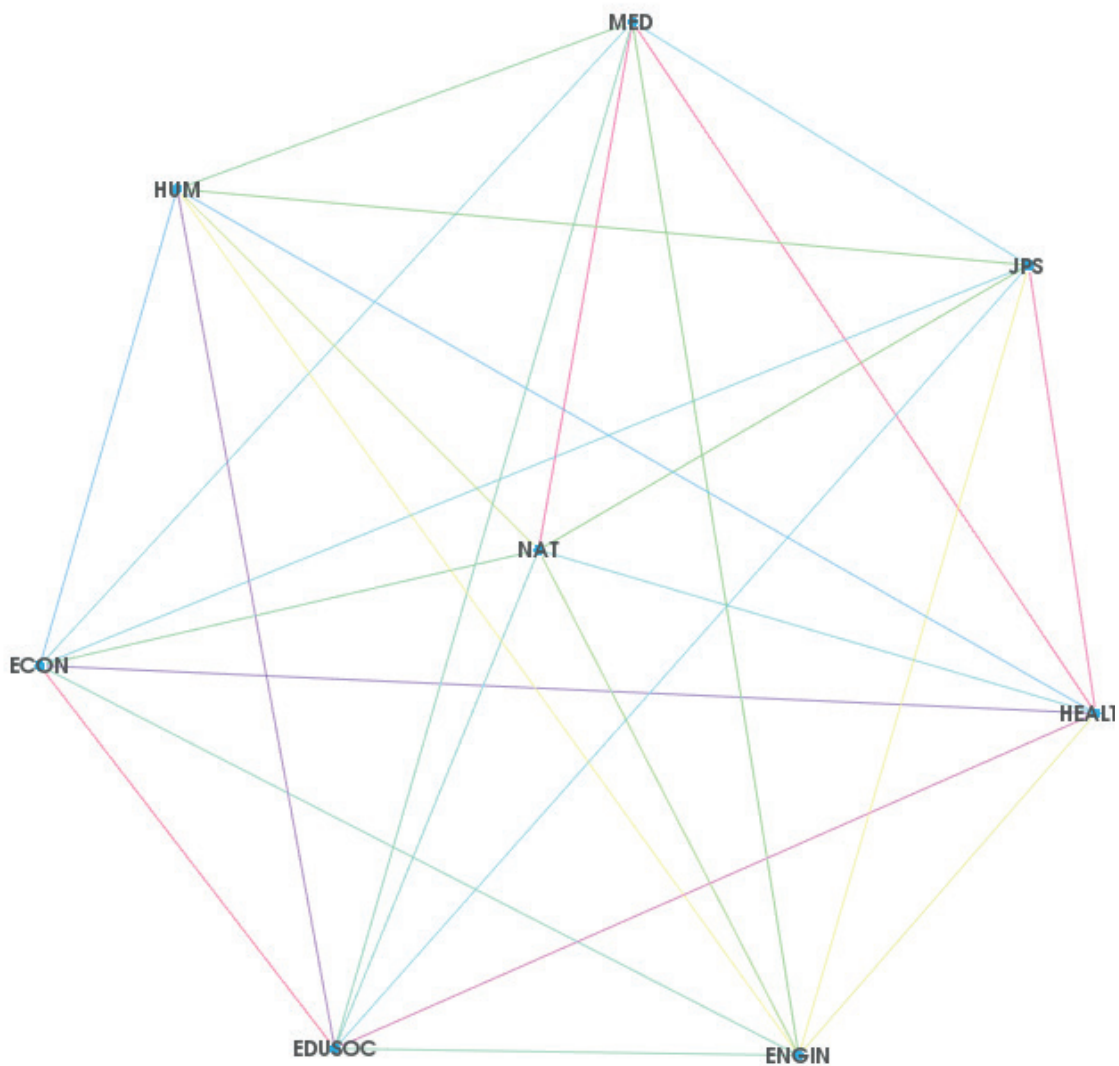
- Map 1: All ORU-authors (and their UoE colour) in relation to each other's based on hybrid clustering methods (use of terms and references). Node (authors) size is based on maximum similarity to the closest node, thereby indicating whether there is a team or research group with a close collaboration disclosed by their common use of references. The map shows how each author relates to all other researchers at ORU. Node size is dependent on "maximum similarity" based on hybrid clustering using references and text. The layout algorithm is Kamada-kawai. For those clustered groups that consist of fairly large nodes we can conclude that there is a research group with some consistency and a common research front, e.g. ENGIN (blue nodes), NAT (green) and ECON (purple).
- Map 2: Related UoE based on use of references. The map shows relations between UoE and is based on shared references and common terms. Interestingly there are relations between all, but the connections are not that strong. The strong relations are coloured Red and those edges (lines between nodes) are quite easy to detect but also to understand why they are strong. The colour scale goes from red to yellow with green and blue in between. HUM, EDUSOC and ECON builds one cluster of more close relationships, and all others except ENGIN are in the other cluster.
- Map 3: All ORU-authors, as in Map 1, and it is again based on hybrid clustering and the layout algorithm Kamada-kawai. However, the node size is based on performance (impact measured by the Percentile Model). Large nodes represent researchers with a higher impact and more influence.
- Map 4: ORU-authors and RÖL (Örebro University Hospital) authors, as in MAP 1, with node (authors) size based on maximum similarity to the closest node, thereby indicating whether there is a team or research group with a close collaboration disclosed by their common use of references. This map might tell you something about how the university hospital research (light pink nodes) is related to the university.
- Map 5: ORU-authors and RÖL authors (Örebro University Hospital; light pink nodes), as in MAP 1; this time with node size dependent on impact (PM Model).



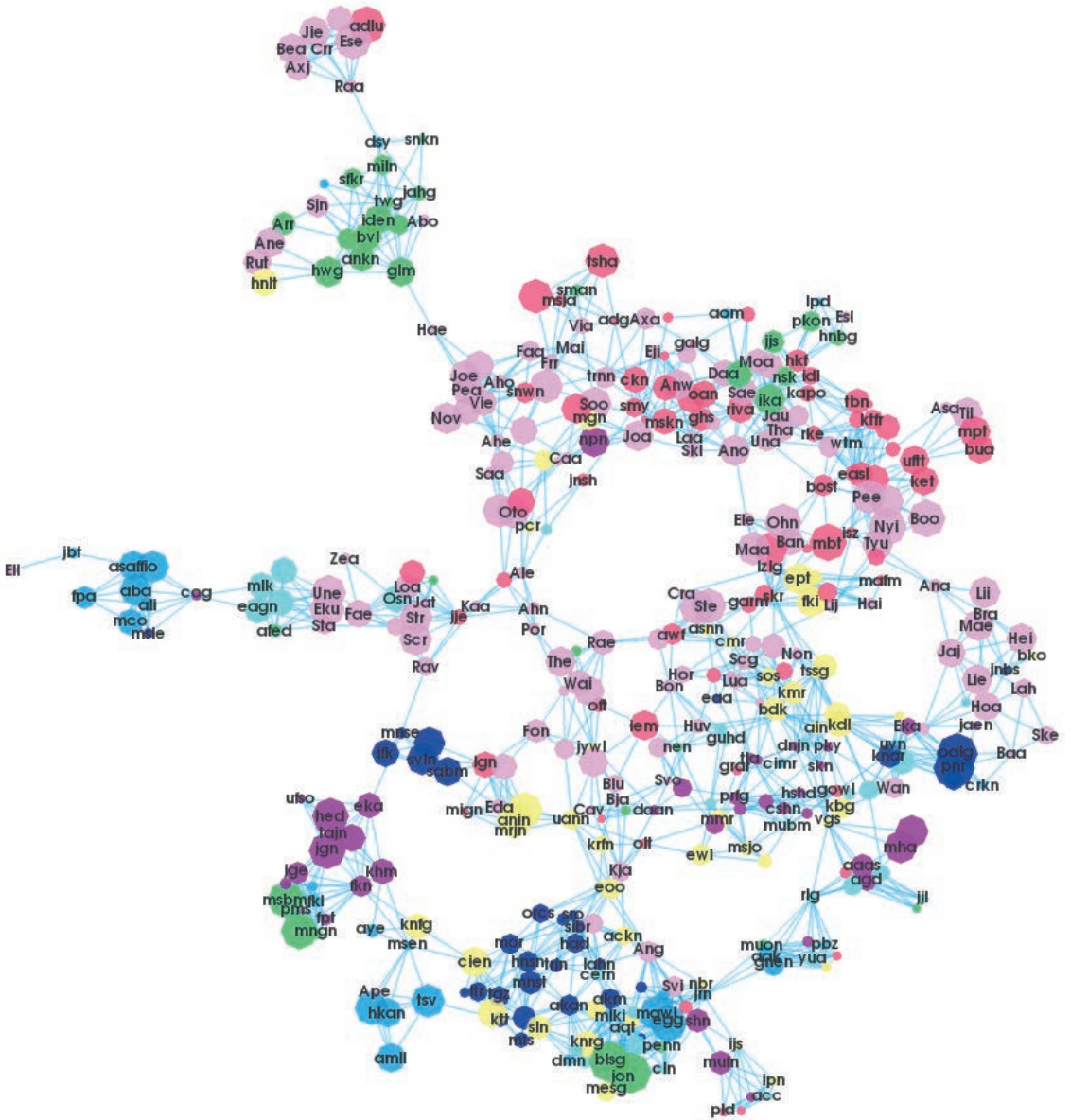
MAP 1. Node size: Similarity between authors (based on hybrid clustering)

N.B! Legends (ORU-ID) are given in Annex F.

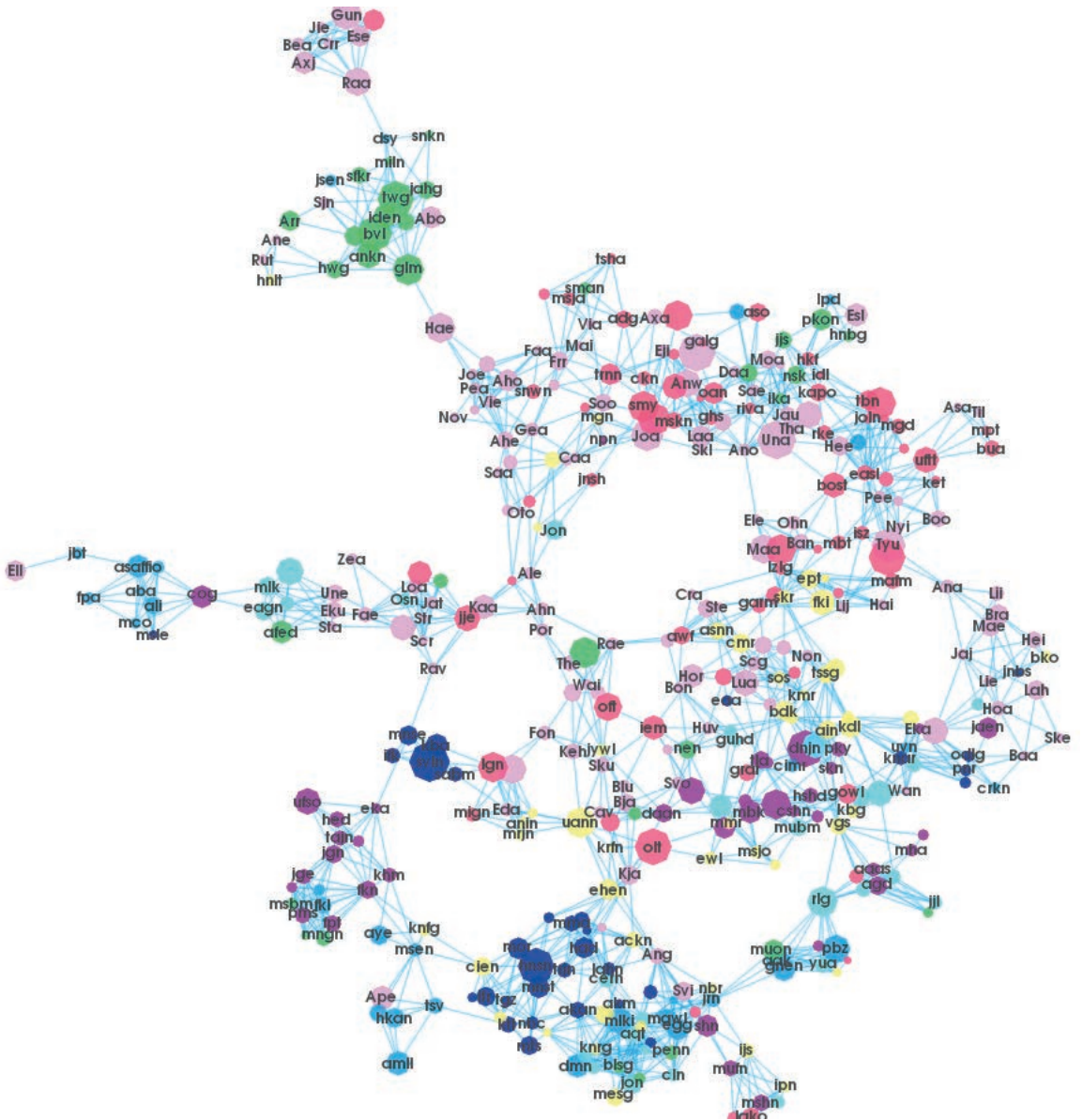
Legends (color): MED-Red; NAT-Green; HUM-Light pink; HEALTH-Yellow; ECON-Purple; SOC-Brown; LPS-Light blue; ENGIN-Blue (dark).



MAP 2. Relations between Units of Evaluation based on hybrid clustering



MAP 4. ORU and Univ hosp. Node size dependent on similarity.



MAP 5. ORU and Univ hosp. Node size dependent on performance (Percentile Model)

Theories and Methods in Evaluative Bibliometrics

Importance of Citations

Bibliometric approaches, whereby the scientific *communication* process can be analysed, are based on the notion that the essence of scientific research is the production of “new knowledge”. Researchers that have theoretical ideas or empirical results to communicate, publish their contributions in journals and books. Scientific and technical literature is the constituent manifestation of that knowledge and it can be considered as an obligation for the researcher to publish their results, especially if public sector funding is involved.

Journals are in almost all areas the most important medium for communication of results. The process of publication of scientific and technical results involves referee procedures, established by academic and scholarly journals. Therefore, international refereed journals imply that the research published has been under *quality control* and that the author has taken criticism from peers within the specialty. These procedures are a tremendous resource for the bettering of research, and are set in motion for free or to a very low cost. A researcher who chooses not to use these resources may seem to be very much aside of the international research community.

The reward system in science is based on recognition, and this emphasises the importance of publications to the science system. Because authors cite earlier work in order to substantiate particular points in their own work, the citation of a scientific paper is an indication of the importance that the community attaches to the research.⁴

Essentially, this is the point of departure of all bibliometric studies; if the above assumption holds, then we should concentrate on finding the best methods for describing and analysing all publications from research groups under consideration.⁵ When we are searching for such methods, our emphasis is on one specific layer of research activities. There are several more layers that can be studied and evaluated, but our focus is on research – basic and applied – and especially on excellence in research. Hence, publications are at the centre of attention. To the family of publications we could have included patents. They indicate a transfer of knowledge to industrial innovation, i.e. into commodities of commercial and social value.

A number of misconceptions about bibliometric analysis are in circulation, partly due to the misuse of journal indicators, partly because a perceived lack of transparency. Certainly, we will not be able to answer all questions and possible remarks to the analysis, but hopefully some of the most common misinterpretations. One important conclusion of our discussion is that the use of bibliometric indicators requires far greater watchfulness when applied to a research group or an individual than for a general description of science at the country or university level.

Basics of Bibliometrics

International scientific influence (impact) is an often used parameter in assessments of research performance. Impact on other’s research can be considered as an important and measurable aspect of scientific quality, but, of course, not the only one. Within most international bibliometric analyses there are a series of basic indicators that are widely accepted.

In most bibliometric studies of science and engineering, data is confined to the following types of document: **articles, letters, proceedings papers and reviews** in refereed research journals or serials. The impact of a paper is often assumed to be judged by the reputation of the journal in which it was published. This can be misleading because the rate of manuscript rejection is generally low even for the most reputable journals. Of course, it is reasonable to assume that the average paper in a prestigious journal will, in general, be of a higher quality than one in a less reputable journal.⁶ However, the quality of a journal is not necessarily easy to determine⁷ and,

⁴ CWTS (2008). See the extensive list of references which points to a serious discourse on issues in scientometrics.

⁵ Narin (1996); CWTS (2008).

⁶ Cole et al. (1988).

therefore, only counting the number of articles in refereed journals will produce a disputable result (Butler, 2002; Butler, 2003).

The question arises whether a person who has published more papers than his or her colleagues has necessarily made a greater contribution to the research front in that field. All areas of research have their own institutional “rules”, e.g. the rejection rate of manuscripts differs between disciplines; while some areas accept 30 – 40 per cent of submitted manuscripts due to perceived quality and space shortages other areas can accept up to 80 – 90 per cent. Therefore, a differentiation between *quantity* of production and *quality* (impact) of production has to be established. Several bibliometric indicators are relevant in a study of “academic impact”: number of citations received by the papers, as well as various influence and impact indicators based on field normalised citation rates. Accordingly, we will not use the number of papers as an indicator of performance, but we have to keep in mind that few papers indicate a low general impact, while a high number of cited papers indicates a higher total impact.

Citations and Theories of Citing

The choice of citations as the central indicator calls for a theory of citing; a theory that makes it possible to explain why author *x* cites article *a* at time *t*? What factors should be considered when we discuss why researchers cite back to former literature? The need for a theoretical underpinning of citation analysis has been acknowledged for a long time and several theories have been put forward.⁸ In summary, there are three types of theories: 1) Normative theories, 2) Constructivist theories, and 3) Pragmatic theories. Normative theories are based on a naïve functionalist sociology, and constructivist theories are based on an opposition against these assumptions. According to the pragmatist school, which seems to be a predominantly Nordic school (e.g. Seglen, 1998, Luukonen, 1997, Amsterdamska & Leydesdorff, 1989; Aksnes 2003), utility in research is an important aspect, as well as cognitive quality, and together they are criteria for reference selection. Based on Cole (1992) the Norwegian Aksnes (2003b) introduces the concepts *quality and visibility dynamics* in order to depict the mechanisms involved.

Factors like journal space limitations prevent researchers from citing all the sources they draw on; it has been estimated that only a third of the literature base of a scientific paper is rewarded with citations. A citation does not mean that the cited author was necessarily “correct”, but that the research was seen as *useful* from the citing side. Do not forget that negative findings can be of considerable value in terms of direction and method. If a paper is used by others, it has some importance. In retrospect the idea or method may be totally rejected; yet use of the citation is clearly closer to “important contribution to knowledge” than just the publication count in itself. The citation signifies recognition and typically bestows prestige, symbolising influence and continuity.⁹ There is no doubt that citations can be based on irrational criteria, e.g. some citations may reflect poor judgment, rhetoric or friendship. Nevertheless, the frequency with which an article is cited would appear to establish a better approximation of “quality” than the sheer quantity of production.¹⁰ Furthermore, citations may indicate an important sociological process: continuity of the discipline. From this perspective, either a positive or negative citation means that the author’s citing and the author cited have formed a cognitive relationship.¹¹

⁷ Hansson (1995), Moed (2005), chapter 5.

⁸ For an excellent review of this topic, see Borgmann & Furner (2002).

⁹ Roche & Smith (1980), p. 344.

¹⁰ Martin & Irvine, 1983; Cole and Cole, 1973; Moed et al 1985. Butler 2003.

¹¹ Cf. Small (1978) proposed the view that citations act as “concept symbols” for the ideas that are referenced in papers.

Citation practices can be described as results of stochastic processes with accidental effects (Nederhof, 1988:207). Many random factors contribute to the final outcome (e.g. structural factors such as publication time-lags etc.) and the situation can be described in terms of probability distributions: there are many potential citers each with a small probability of actually giving a reference, but the chance gets higher with each former reference (Dieks & Chang, 1976: 250).

This also creates difficulties when it comes to levels of significance:¹² “(...) when one paper is cited zero times, another paper, of the same age, has to be cited at least by five different authors or groups of authors, for the difference to be statistically significant. (...) This implies that when small numbers of papers are involved, chance factors may obscure a real difference in impact. However, as the number of papers involved in comparisons increase, the relative contribution of chance factors is reduced, and that of real differences is increased” (Nederhof, 1988:207). Accordingly, we have to be very careful in citation analysis when comparing small research groups. Chance factors and technical problems with citations have too pronounced an influence.

Principle of Anti-Diagnostics

The types of uncertainties involved in bibliometrics make it necessary to underscore the **principle of anti-diagnostics**: “(...) while in medical diagnosis numerical laboratory results can indicate only pathological status but not health, in scientometrics, numerical indicators can reliably suggest only eminence but never worthlessness. The level of citedness, for instance, may be affected by numerous factors other than inherent scientific merits, but without such merits no statistically significant eminence in citedness can be achieved.” (Braun & Schubert, 1997: 177).

The meaning of this principle is that it is easier with citation analysis to identify excellence than to diagnose low quality in research. The reasons for absence of citations might be manifold: the research community has not yet observed this line of research; publications might not be addressed to the research community, but to society, etc. Clearly, results for a subunit of evaluation that are clearly above the international average (= 1.0), e.g. relative citation levels of 2.0 – 3.0 or higher indicates a strong group and a lively research, but citation levels below 1.0 does not necessarily indicate a poorly performing group.

Citation Indicators

The above review of the literature reveals that there are limitations to all theories and all methods for finding excellence in research. According to Martin & Irvine (1983:70) we have to consider three related concepts: *Quality*, *Importance* and *Impact*. *Quality* refers to the inherent properties of the research itself, and the other two concepts are more external. *Importance* and *impact* are concepts that refer to the relations between the research and other researchers/research areas. The latter also describes the strength of the links to other research activities.

We can discuss the *quality* of a research paper without considering the number of times it has been cited by others or how many different researchers that cited it. It is not an absolute, but a relative characteristic; it is socially as well as cognitively determined, and can, of course, be judged by many other individuals. *Importance* refers to the potential influence¹³ on surrounding research and should not be confused with “correct”, as an idea “must not be correct to be important” (Garfield et al. 1978: 182).¹⁴ Due to the inherent imperfections in the scientific communication system the actual impact is not identical with the importance of a paper.

¹² Cf. Schubert & Glänzel (1983).

¹³ Zuckerman (1987). Of course, some of the influences (and even facts) may be embedded in the author’s mind and not easily attributable.

¹⁴ Again, negative citations are also important: “The high negative citation rate to some of the polywater papers is testimony to the fundamental importance of this substance if it could have been shown to exist” (Garfield et al. 1978.). We assume that the same apply for negative citations to cold fusion papers.

Then, it is clear that *impact* describes the actual influence on surrounding research: “*while this will depend partly on its importance, it may also be affected by such factors as the location of the author, and the prestige, language, and availability, of the publishing journal*” (Martin & Irvine 1983: 70; cf. Dieks and Chang 1976). Hence, while impact is an imperfect measure it is clearly linked to the scientific work process; used in a prudent and pragmatic approach measures based on impact give important information on the performance of research groups.

Validation of Bibliographic Data

One of the practical problems is that of constructing the basic bibliography productions of the units of evaluation. This is not a trivial question as papers from one institution might be headed under several different names (de Bruin & Moed, 1990). The identification of papers included in this exercise has been done on the individual level. Each researcher was identified using mainly Internet sources; e.g. searches for publications and CVs. On the basis of this material an Author Finder search was performed in the Web of Science database. After the first results were presented, there was a round of validation where the data was scrutinised by each researcher and the administration of each unit and subunit of evaluation.

Coverage of Scientific and Technical Publications

Explorations made by Carpenter & Narin (1981), and by Moed (2005), have shown that the Thomson Reuters database is representative of scientific publishing activities for most major countries and fields: “In the total collection of cited references in 2002 ISI source journals items published during 1980 – 2002, it was found that about 9 out of 10 cited journal references were to ISI source journals” (Moed 2005:134). It should be emphasised that Thomson mainly covers *international* journals, and that citations analysis is viable only in the context of international research communities. National journals and national monographs/anthologies cannot be accessed by international colleagues. Consequently, publications in these journals are of less interest in a citation exercise of the type. As long as we are calculating relative citation figures based on fields and sub-fields in the ISI database, the inclusion of national or low cited journals will only have the effect of lowering the citation scores, and is, therefore not an alternative.

In some studies it has been suggested that there are two distinct populations of highly cited scholars in social science subfields — one consisting of authors cited in the journal literature, another of authors cited in the monograph literature (Butler, 2008; Cronin et al., 1997).

As the WoS has a limited coverage of monographic citing material, the latter population will hardly be recognised in the database (Borgmann & Furner, 2002).

But, in the overall sense, WoS works well and covers most of the relevant information in a large majority of the natural sciences and medical fields, and quite well in applied research fields and behavioural sciences (CWTS, 2007:13). However, there are exceptions from that rule.

Considerable parts of the social sciences and large parts of the humanities are either not covered very well in WoS or have citations patterns that do not apply for studies based on advanced bibliometrics (Butler, 2008; Hicks, 1999; Hicks, 2004). That is one of the reasons as to why the evaluation also includes data from the university repository DiVA.

Matching of References to Articles

The Thomson Reuters database consists of articles and their references. Citation indexing is the result of a linking between references and source (journals covered in the database). This linking is done with an algorithm, but the one used by Thomson Reuters is conservative and the consequence is non-matching between reference and article. Several of the non-matching problems relate to publications written by ‘consortia’ (large groups of authors), to variations and errors in author names authors, errors in initial page numbers, discrepancies due to journals with dual volume-numbering systems or combined volumes, to journals applying different

article numbering systems or multiple versions due to e-publishing.¹⁵ Approximations indicate that about seven per cent of citations are lost due to this conservative strategy. Thomson Reuters seem anxious not to over-credit authors with citations. In the analysis an alternative algorithm, that addresses a larger number of the missing links, has been applied.

Self-Citations

Self-citations can be defined in several ways; usually with a focus on co-occurrence of authors or institutions in the citing and cited publications. In this report the recommendation to eliminate citations where the first-author coincides between citing and cited document is applied (Aksnes, 2003a). If an author's name can be found at other positions, as last author or middle author, it will not count as a self-citation. This more limited method is applied for one reason: if the whole list of authors is used the risk for eliminating the wrong citations will be large. On the downside we will probably have a senior-bias with this method; this will probably not affect the units of evaluation, but caution is needed in analysis on the individual level (Adams, 2007: 23; Aksnes, 2003b; Glänzel et al., 2004; Thijs & Glänzel, 2005).

Time Window for Citations

An important factor that has to be accounted for is the time effects of citations. Citations accumulate over time, and citation data has to cover comparable time periods (and within the same subfield or area of science, see below). However, in addition to that, the time patterns of citation are far from uniform and any valid evaluative indicator must use a fixed window or a time frame that is equal for all papers. The reason for this is that citations have to be appropriately normalised. Most of our investigations use a decreasing time-window from the year of publication until August 2014. However, some of our indicators are used for time-series and in these cases a fixed two year citation window is applied. Publications from year 2003 receive citations until 2005; publications from 2004 receive citations until 2006 and so on.

Fractional Counts and Whole Counts

In most fields of research, scientific work is done in a collaborative manner. Collaborations make it necessary to differentiate between whole counts and fractional counts of papers and citations. Fractional counts give a figure of weight for the contribution of the group to the quantitative indicators of all their papers. By dividing the number of authors from the unit under consideration with the number of all authors on a paper we introduce a fractional counting procedure. Fractional counting is a way of controlling for the effect of collaboration when measuring output and impact. In consequence, from *Frac P*-figures we can see to what extent the group receives many citations on collaborative papers only, or if all papers from the group are cited in the same manner.

Fields and Sub-Fields

In bibliometric studies the definition of fields is generally based on the classification of scientific journals into more than 250 sub-fields, developed by Thomson Reuters. Although this classification is not perfect, it provides a clear and consistent definition of fields suitable for automated procedures. However, this proposition has been challenged by several scholars (e.g. Leydesdorff, 2008; Bornmann et al. 2008). Two limitations have been pointed out: (1) multidisciplinary journals (e.g. *Nature*; *Science*); and (2) highly specialised fields of research.

The Thomson Reuters classification of journals includes one sub-field category named "Multidisciplinary Sciences" for journals like *PNAS*, *Nature and Science*. More than 50 journals are classified as multidisciplinary since they publish research reports in many different fields. Fortunately, each of the papers published in this sub-field are subject specific, and, therefore,

¹⁵ Moed (2002) summarises the major problems found with the citation algorithm, cf. Moed (2005), chapter 14 "Accuracy of citation counts".

it is possible to assign a subject category to these on the article level – what Glänzel et al. (1999) calls “item by item reclassification”. That strategy has been used in this report.

Normalised Indicators

During the latest decades standardised bibliometric procedures have been developed to assess research performance.¹⁶ Relative indicators or rebased citation counts, as an index of research impact, is widely used by the scientometrics research community. They have been employed extensively for many years by Thomson Reuters in the Essential Science Indicators. Research teams in the United States and in Hungary popularised the central concepts of normalisation during the 1980s.¹⁷ The method applied here builds on a statistic calculation at the paper level and on a year to year basis. Publications from 2008 are given a seven year citation window (up to 2014). Because of these (small) differences we name the indicator NCS (Normalised Citation Score), but, it should be underlined that it is basically the same type of indicator as the one today used by bibliometric groups in Leiden and Leuven.

Citation Normalisation

In this report normalisation of citations is performed in reference to two different normalisation groups: WoS sub-fields and journals. When normalising, we also take publication year and publication type into account. A normalisation group might then look as follows: papers of the type “review” within the sub-field “Metallurgy & Metallurgical Engineering” published in 2002.

The most commonly used normalisation type was developed by Schubert, Glänzel and Braun during the 1980s (1988). Simultaneously the Leiden group (Moed et al. 1988) developed a variant methodology with the “crown indicator”. These normalised indicators are typically named CPP/JCS or CPP/FCS depending on whether the normalisation is carried out in relation to journals or sub-fields. The Leiden indicator is defined as follows:

$$\frac{\sum_{i=1}^P c_i}{\sum_{i=1}^P [\mu_f]_i}$$

where c is the number of cites to paper i and $[\mu_f]_i$ is the average number of citations received by papers in the normalisation group of paper i . In our calculations of “Field normalised citation score (NCSf)” and “Journal normalised citation score (NCSj)” we have chosen to adjust this as follows. First, the field normalised citation score (NCSf):

$$\frac{1}{P} \sum_{i=1}^P \frac{c_i}{[\mu_f]_i}$$

The difference is that our calculation treats all papers equal, while the Leiden version gives higher weight to papers in normalisation groups with higher reference values, cf. Lundberg (2006), s. III:3; cf. Visser et al, (2007).

When calculating the “Normalised journal citation score (NCSj)” (similar to the Leiden-measure JCS/FCS) we use the following formula:

$$\frac{1}{P} \sum_{i=1}^P \frac{[\mu_j]_i}{[\mu_f]_i}$$

¹⁶ Schubert et al (1988), Glänzel (1996), Narin & Hamilton (1996), van Raan (1996), Zitt et al. (2005).

¹⁷ Cf. Zitt (2005: 43).

where $[\mu_j]_i$ is the average number of citations received by papers in the journal of paper i and $[\mu_f]_i$ is the average number of citations received by papers in the sub-field of paper i .

Another citation indicator used is the “Standard citation score”. This indicator is defined as follows:

$$\sum_{i=1}^P \frac{\ln(c + 0,5) - [\mu_{f[ln]}]_i}{[\sigma_{f[ln]}]_i}$$

where $[\mu_{f[ln]}]_i$ is the average value of logarithmic number of citations (plus 0.5) in the normalisation group and $[\sigma_{f[ln]}]_i$ is the standard deviation of the $[\mu_{f[ln]}]_i$ distribution (based on McAllister, PR, Narin, F, Corrigan, JG. 1983).

Levels of Performance

Calculation of the number of citations per paper is compared to a sub-field reference value give the field normalised citations. With this indicator it is possible to classify performances (for groups of 10 – 30 researchers) in five different classes:¹⁸

- A. $NCSf \leq 0.6$ significantly far below international average (*Insufficient*)
- B. $0.60 < NCSf \leq 1.20$ at international average (*Good*)
- C. $1.20 < NCSf \leq 1.60$ significantly above international average (*Very good*)
- D. $1.60 < NCSf \leq 2.20$ from an international perspective very strong (*Excellent*)
- E. $NCSf > 2.20$ global leading excellence (*Outstanding*)

It should be noted that this methodology is different from the Leiden procedures, as shown above, in several respects. Figure 1 shows the distribution over citation classes for 326 Swedish university units of assessments from all areas of science and technology. The result highlights the methodological considerations invoked by van Raan (2006b).

¹⁸ We refer to van Raan (2006a) for a further discussion of the statistical properties of bibliometric indicators.

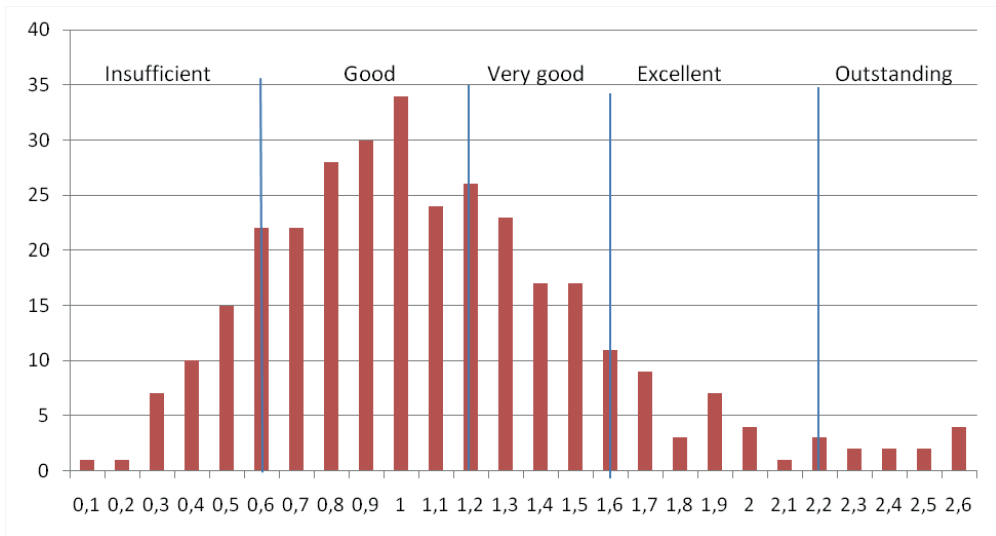


Figure 1: Distribution of Normalised Citation Score (NCSf) (1.00=global average): Number of Units of Evaluation as a function of NCSf (class width = 0.10). The data is retrieved from Research Assessment at Uppsala and Lund (see Visser et al 2008), and assessments at KTH, SLU, Aalto and MIUN.

Top 5 Per Cent

The above normalised indicators give a good account of performance. Still, we might need simple figures that indicate the excellence of the group in just one number; the *Top 5 %* is an indicator of that type. As an indicator it expresses the number of publications within the top 5 % of the worldwide citation distribution of the fields concerned for the research group. This approach provides a better statistical measure than those based on mean values. It is suggested that this indicator should be used together with other indicators and in this case as “a powerful tool in monitoring trends in the position of research institutions and groups within the top of their field internationally” (CWTS, 2007: 25). If the research group has a high proportion of articles in the Top 5 % they will probably have a large impact on their research field.

Vitality

Boyack and Börner (2003) established the term “vitality” defining vital research as areas with the following features:

- A stable/increasing number of publications in prominent journals with high impact factors
- High *export* factors indicating that research is acknowledged and utilised in other domains
- A tightly knit co-authorship network leading to efficient diffusion of knowledge
- Funding resulting in larger numbers of high impact publications
- New emerging research fields

Later Boyack (2007) and Klavans & Boyack (2008) operationalised the concept of vitality as field normalised *reference age* of articles. Even if there is a lack of consensus in the field of bibliometrics on how to measure reference age, there are not too many options. Price defines the so-called *Price Index* as “the proportion of the references that are to the last five years of literature” (Price, 1979; Egghe, 1997). Klavans and Boyack (2008) suggest the use of mean or average age of references with normalisation to the field, and their recommendations is followed here. The indicator then varies around 1.00, and values above the international mean indicate a higher vitality.

Vitality, reference age of cited literature, is an interesting factor in assessments of research performance. This observation rests on the hypothesis that researchers at the front use the most recent references and that they “are committed to participating at the forefront of science rather than on older science” (ibid.). Typically, they are willing to shift their emphasis from older ideas to newer ideas when warranted. Researchers with an older average reference age are far less committed to focusing on new science. Remember that there are differences between fields of science¹⁹ that have to be accounted for and, therefore, the proposed method uses normalisation in relation to WoS sub-fields. Nevertheless vitality is as an index very simple, and, hence, the sociological interpretation is rather ambiguous.

Field Adjusted Production (Waring)

It is well known that medical researchers tend to produce more, often shorter papers where methodology and prior knowledge is codified in citations and engineering scientists produce less frequently and have fewer cross-references (Narin and Hamilton, 1996; Glänzel, 1996). These field differences affect both citation rates and mean number of papers per author, and the differences are to some extent explained by shifting coverage of fields in the ISI database.

In order to compute a field adjusted factor we have to meet certain obstacles: publication databases give information on the authors that are active during a given period, not all the potential authors. As the non-contributors (non-publishing authors) are unknown it is difficult to create an average publication rate per author taking all potential authors into account. But, there is a proposed mathematical solution to this problem: bibliometric data are characteristically “Waring distributions” (Schubert and Glänzel, 1984). With information on the distribution of author publication frequencies an estimate of the average publication rate per researchers (contributors and non-contributors) in a given field, country or such can be computed (Telcs, Glänzel and Schubert, 1985).

The approach is based in mathematical statistics and a theoretical discussion can be found in papers by Braun, Glänzel, Schubert and Telcs during the second half of the 1980s. Inspired by Irwin (1963) they showed that bibliometric material had the properties of “Waring distributions”. A straight line should be obtained by plotting the truncated sample mean of these distributions (Telcs, Glänzel and Schubert, 1985). By extrapolating this series to Origo, the numbers of non-contributors are included. The intercept of this line is the average productivity of all potential authors during a given period of time (Braun, Glänzel and Schubert, 1990). In our model this value is used as a reference value and is computed per field for Nordic data. Several successful empirical tests using the Field Adjusted Production (FAP) model have been implemented (e.g. Schubert and Glänzel 1984; Schubert and Telcs, 1986; Buxenbaum, Pivinski and Ruberg, 1987; Schubert and Telcs, 1989; Sandström and Sandström, 2008b).

¹⁹ Originally, the motive for Price’s research on this was to demonstrate these differences between areas. Moed (1989) has showed that Price statement might be an oversimplification.

The Field Adjusted Production is calculated as follows:

$$\sum_{i=1}^n \frac{P_i}{r_i}$$

where P_i is the number of papers in field i and r_i is the (estimated) average number of papers per researcher in field i . The estimation of the reference values is performed for each field by first calculating the s -truncated sample mean of each field as follows:

$$\frac{\sum_{i=s}^{\infty} i n_i}{\sum_{i=s}^{\infty} n_i}$$

Where n_i is the number of authors having exactly i papers. The truncated sample means are plotted versus s and the intercept of the fitted line, using weighted least squares linear regression, is used as an estimate for number of papers per author for the entire population. The regression is weighted using weights proposed by Telcs et al. (1985).

When applying this model, authors with an address at Nordic universities, are used as data. Homonyms and similar problems are taken care for by automatic in combination with manual procedures. This was done for all Nordic universities (Sweden, Finland, Denmark and Norway) and the operation yielded almost 400 000 unique authors for the period 2008 – 2011.

Field delineation is an important issue. For citations the Thomson/ISI subject categories are used, but these 250 categories create too small samples when Nordic authors are used to create productivity data. There are several alternative ways of producing macro classes (e.g. SPRU classes or the Thomson ESI field categories). In this case all journals were clustered using inter-citations as proximity values (Boyack and Klavans, 2006), and the least frequent relation were decisive in order to distinguish, as far as possible, between basic and applied sciences. It has been shown by Rinia, van Leeuwen, Bruins, van Vuren and van Raan (2002) that applied sciences tend to cite back to more basic sciences, not the other way around. The clustering procedure was based on the SLM (smart local moving) algorithm (Waltman &, van Eck 2013) and created five macro classes (fields).

The methodology described above was used to establish a reference value based on all Nordic universities. By using the number of articles per subunit divided by the reference value (the field factor) we obtain the relative quantity of production performed by the subunit. This indicator is called the “Field Adjusted Production (FAP)”. Then, simply by multiplying the specific production by the field-normalised citation score (NCSf) we establish a combined value incorporating production and “quality”. The resulting total sum represents the production from the subunit and should be related to the research funding obtained by the subunit. The advantage of using this method is that units are made comparable although they have their main activities in separate fields of science.

The Percentile Model

See previous heading or Sandström & Wold (2015).

The Percentile Level

Based on the identification of unique and disambiguated authors Sandström & Sandström have created a file of Swedish researchers 2008 – 2012. Based on the Percentile Model these researchers have been ranked in percentiles and percentile groups. This can be used as a benchmark for performance evaluation: To which group of performances is my number of fractionalised articles and normalised citations equivalent?

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Annexes

Annex A: Vice chancellor's decision directive



REKTORSBESLUT

2015-01-27

Dnr ORU 1.4.1-3342/2014

Utvärdering av forskningen vid Örebro universitet – genomförande och projektgrupp

I oktober 2014 uppdrog rektor till en styrgrupp att inkomma med förslag på metod för en utvärdering, vilken kan ligga till grund för bedömning av forskningens kvalitet och för forskningsstrategiska beslut, samt utarbeta en tids- och arbetsplan. Uppdraget skulle avrapporteras till rektor senast den 25 november.

Styrgruppen har i enlighet med uppdraget lämnat sitt förslag.

Rektor beslutar

att utvärderingen av forskningen vid Örebro universitet ska genomföras enligt bilaga.

att en projektgrupp utses bestående av

- Gunilla Lindström, prorektor (ordförande)
- Anna-Karin Andershed, dekan HS-nämnden (vice ordförande)
- Robert Brummer, dekan MH-nämnden
- Åke Strid, dekan ENT-nämnden
- Louise Pålsson, universitetsdirektör
- Thorsten Nybom, rektors rådgivare
- Ulf Sandström, forskningsanalytiker
- Mats Karlsson, forskningschef vid ÖLL
- Doktorandrepresentant (utses av studentkåren)
- Anna Lindholm Ulfvensjö, utredare (koordinator)
- Anna-Karin Frih, forskningsrådgivare (redaktör)

Beslut i ärendet har fattats av rektor efter föredragning av utredaren Anna Lindholm Ulfvensjö. Övriga som har varit med om den slutliga handläggningen utan att delta i avgörandet framgår av separat förteckning.

Jens Schollin

Anna Lindholm Ulfvensjö

Rektor

Postadress: 701 82 Örebro Besöksadress: Fakultetsgatan 1

Telefon växel: 019-30 30 00 Telefax: 019-30 34 65 Postgiro: 78 81 18-8 E-post: fornamn.efternamn@oru.se www.oru.se

ORU2015 – utvärdering av forskningen vid Örebro universitet 2008–2014

Introduktion till utvärderingen

I *Vision 2016* slås fast att universitetet ska kännetecknas av internationellt framgångsrik forskning. Att öka vår internationella publicering, att utveckla våra internationella forskningssamarbeten och att stimulera aktiviteter för att kraftigt öka våra externa forskningsmedel är strategier för att nå visionen.

Syftet med ORU2015 är att kartlägga forskningens kvalitet och utveckling under perioden 2008–2014, för att få ett tillförlitligt underlag för framtida forskningsstrategiska beslut.

Rektor utsåg i oktober 2014 (dnr ORU 1.4.1-3342/2014) en styrgrupp med uppdrag att utforma ett förslag till utvärderingens inriktning och omfattning samt att utarbeta en tids- och arbetsplan. Styrgruppen har bestått av Gunilla Lindström (ordförande), Anna-Karin Andershed (dekan HS), Robert Brummer (dekan MH), Åke Strid (dekan ENT), Håkan Stattin (professor), Thorsten Nybom (professor), Louise Pålsson (universitetsdirektör), Ulf Sandström (publikationsanalytiker), Mats Karlsson (forskningschef, Region Örebro Län) och Renée Andersson (doktorandrepresentant). Anna Lindholm Ulfvensjö (utredare) har dokumenterat diskussionerna som förts i styrgruppen.

Styrgruppen har i enlighet med uppdraget lämnat sina förslag till rektor som ställt sig bakom dessa.

Genomförande av ORU2015

Inriktning och omfattning

All forskning som bedrivits vid ORU under 2008–2014 ska ingå i utvärderingen, liksom den forskning som bedrivits inom Örebro läns landsting under samma period. (utvärderingsenheterna beslutas av fakultetsnämnderna i samråd med ämnesansvariga och prefekter.

Utvärderingen har tre huvudkomponenter, *ORU2015 Del I*, *ORU2015 Del II* och *ORU2015 Del III*.

Som *Del I* genomförs en bibliometrisk analys där ett *brett bibliometriskt underlag* som omfattar specifika indikatorer för forskningskvalitet, produktivitet, samarbeten, internationell dimension, förhållandet till forskningsfronten etc, tas fram i *två steg*. Den *första bibliometriska analysen* görs utifrån de underlag som finns i DiVA respektive Web of Science efter att forskarna sett över och eventuellt kompletterat sina publikationer i DiVA. Den första bibliometriska analysen, *steg 1*, remitteras till den enskilda forskaren för kontroll av underlaget. Den slutliga bibliometriska analysen, *steg 2*, utgör en av forskningsutvärderingens huvudkomponenter, d.v.s. *ORU2015 Del I*.

För **ORU2015 Del II** tar utvärderingsenheterna fram en självvärdering av sin forskning. Den information som enskilda forskare lagt in i Forskningsdatabasen plockas ut i form av rapporter som, tillsammans med den bibliometriska analysen i Del I, tjänar som underlag för självvärderingen.

ORU2015 Del III består av en extern bedömning av utvärderingsenheterna. En extern panel får i uppdrag att med Del I, Del II och rapporterna från Forskningsdatabasen som underlag, samt ev. ytterligare relevant information, diskutera och bedöma i vilken mån respektive utvärderingsenhet lever upp till epitetet internationellt framgångsrik forskning. Den externa expertpanelen arbetar som en panel, där experter inom respektive vetenskapsområde ingår. Panelen beräknas innefatta ett dussintal personer. Platsbesök för att ge panelen möjlighet att inhämta kompletterande underlag för sin slutbedömning, planeras ingå.

Arbetsplan

Styrgruppen övergår i en projektgrupp för att hantera frågor som aktualiseras under utvärderingens gång. Vice ordförande i projektgruppen är Anna-Karin Andershed. Ytterligare stöd i arbetet inhämtas från institutionerna, olika administrativa enheter och rektors stab samt från forskarna och utvärderingsenheterna. Ulf Sandström genomför de bibliometriska analyserna.

Tidplan

- December 2014: Universitetsledningen meddelar officiellt att **ORU2015** kommer att genomföras och forskarna uppmanas i det sammanhanget se till att alla publikationer införts i DiVA samt att informationen i Forskningsdatabasen är aktuell.
- Januari-februari 2015: Den *första bibliometriska analysen* genomförs.
- Mars: Analysen går på remiss till verksamheten och forskarna som kontrollerar att alla uppgifter är korrekta.
- April: Den *slutliga bibliometriska analysen* görs och därmed är **ORU2015 Del I** avslutad.
- Maj-juni: Analysen och rapporten från Forskningsdatabasen överlämnas till utvärderingsenheterna som genomför självvärderingar av sin forskning, dvs. **ORU2015 Del II**.
- Juli: Materialet från de båda delarna skickas till den externa expertpanelen.
- September-oktober: Panelen gör sitt platsbesök och lämnar därefter sin bedömning.
- **ORU2015 Del III** består av panelutlåtandena som inhämtas snarast efter platsbesöket.
- Den slutliga **ORU2015** färdigställs under november och offentliggörs i december 2015.

Annex B: Instructions to the Panel

2015-09-09

ORU2015

Assessment of research at Örebro University 2008-2014

Dear Panelist,

The ORU2015 project group and I hereby heartedly welcome you to the panel's work on assessment of research at Örebro University (ORU). The evaluation material included here is meant to provide you with the necessary information for your evaluation.

The primary aim of the research evaluation ORU2015 is to assess the status and current potential of research at ORU to create a basis for future strategic research policy planning.

The panel meeting, as announced before, takes place at ORU starting at 9 o'clock on the 21st and closing at 4 o'clock on the 22nd of October.

Place: Örebro University, Entréhuset 3rd floor, Representationssalen.

For directions: <http://www.oru.se/English/About-the-University/Contact-us/>

The Panel

The 14 member panel will be chaired by professor Dan Brändström. The multidisciplinary ORU2015 panel consists of the following professors:

- Dan Brändström, chair, dan.brandstrom@telia.com
- P.A.A. van den Besselaar, bibliometrics, p.a.a.vanden.besselaar@vu.nl
- Stefan Nordlund, chemistry, SU, stefan.nordlund@dbb.su.se
- Lars Hassel, economy, HH at UmU, lars.hassel@umu.se
- Catarina Coquand, computer science, catarina.coquand@mah.se
- Gudrun Dahl, social antropology, SU, gudrun.dahl@socant.su.se
- Kimmo Nuotio, law, HY, kimmo.nuotio@helsinki.fi
- Anders Ekbohm, medicin, KI, anders.ekbom@ki.se
- Ingalill Rahm Hallberg, health sciences, LU, ingalil.rahm_hallberg@rektor.lu.se
- Leif Lewin, political sciences, UU, Leif.Lewin@statsvet.uu.se
- Hans Johannesson, technology, Chalmers, hansi@chalmers.se
- Torben Schroeder, surgery, torben.schroeder@regionh.dk
- Alexander von Eye, psychology, voneye@msu.edu
- Kenneth Nordgren, didactics, kenneth.nordgren@kau.se

If you have not yet settled your travel and hotel arrangements in Örebro please contact Carina Gavlefors, carina.gavlefors@oru.se, at your earliest convenience.

The evaluation material

The evaluation material consists of **Part I: Bibliometrics** (Bibliometric peer review of ORU research 2008-2014), **Part IIa: ORU Database information** on research, competence and resources and **Part IIb: Self evaluations** (both parts a and b integrated in the 'book' ORU2015 - Örebro Research Evaluation). The panel's evaluation report will then finally constitute Part III of the overall ORU2015 assessment.

It is of course free for the panelists to use supplementary information found on Web provided research information systems (i.e. ORCID, ResearchGate, WoS, Scopus, etc., etc.) if relevant for the evaluation. If there is need for specific publications as complementary material for your evaluation please retrieve them from Eva Undén at Örebro University Library (eva.unden@oru.se) by sending her your detailed request.

Tasks for the panelists

The overall task for the panel assessment is to provide thoughts and conclusions on the status of research at Örebro University by indicating competitive research areas and environments with sustainability and potential.

Specific tasks

Task for all panelists: Before the panel meeting we ask every one of you to read, learn about and comment the research in all the 3 faculties. Further, to the best of your knowledge make short **written notes** also indicating evaluation marks, in line with the points of reference and marks below, on individual evaluation sub-units. Since the evaluation material to a considerable extent provides meta-data (i.e. bibliometric indicators/economy and resources/research infra-structure/etc, etc) you will generally be able to make some relevant comments without being an immediate peer.

Your short **written notes** enable you to take part in the panel discussions even if the sub-units to be discussed are not entirely in your field of expertise. You should bring your short **written notes** (in downloadable format) to the panel meeting. The length of the short **written notes** should be limited to a few sentences only. The panel chair may ask you to provide him with your notes. (You may of course restrain from making notes including marks if you feel a specific sub-unit's research is too remote to you.)

Mark the short **written notes** with the number of the sub-unit and your name.

In addition brief **bibliometric notes** indicating bibliometric marks (1-5) for all sub-units will be drafted by Peter van den Besselaar. Brief notes on the sub-units' significance in education and teaching will be drafted by Kenneth Nordgren (high, moderate, low).

Task for a panelist as rapporteur: As panelist you will also be assigned a task as the rapporteur 1 or 2 for a number of evaluation sub-units which are closer to your expertise and where you are considered to be more of an immediate peer. There will be 2 rapporteurs for each evaluation sub-unit. A short **draft statement** of your evaluation, also including a grading (1-5), in line with the points

of reference below of the specific evaluation sub-units that have been assigned to you as rapporteur should preferably be sent to malin.masterton@oru.se at your best convenience before October 21st. Alternatively, at the latest be available and ready to download upon your arrival.

The short **draft statements** by the rapporteurs should be limited from 1 page to 2 pages. Exceptionally, 4 pages depending on the extent of the evaluation sub-unit (applies mainly to the sub-units of the Faculty of Medicine and Health).

Mark the short **draft statements** with the number of the sub-unit and the name of the Rapporteur.

The panel discussion: During the panel discussions the short **draft statements** prepared by the rapporteurs are made available for all panelists. The rapporteurs first brief the chair and the rest of the panel on their evaluation. After this the chair invites the rest of the panelists to make further comments (mainly based on their written notes) and then closes the discussion after having reached a general agreement on the **panel meeting's evaluation statement**. This statement will be finalized by the meeting secretariat during the meeting. If this is not possible the two Rapporteurs complete the statement after the meeting and Rapporteur 1 sends it to the chair preferably **by November 1st** to enable the chair to submit the panel's final evaluation statements **by November 9**.

The final evaluation statements should generally not exceed 3 pages respectively 6 pages (large sub-units). This is of course also dependent on the extent of the research in the sub-unit.

Points of reference

(Please use the numbering and heading as below in your notes and statements.)

1. *Quality of research*

Scientific output and quality (Part I)

Significance, originality and relevance (Part IIa)

2. *Research environment and infrastructure*

Scientific competence, coherence and resources (Part I, IIa, IIb)

Leadership and organization (Part I, IIa, IIb)

3. *Scientific and social interaction*

Collaboration in international scientific networks (Part I)

Collaboration in the national scientific networks (Part I)

Societal interactions (Part IIb)

4. *Future potential*

Vitality and break through potential (Part I, IIb)

Sustainability (Part I, IIa and IIb)

Summary and recommendations including Overall grade (1-5)

Evaluation marks (grade)

Excellent	(5) Research has excellent quality and volume, published with great impact internationally and has a leading position in its field in Sweden.
Very Good	(4) Research has very good quality and volume of international publications still not clear break-through internationally.
Good	(3) Research has a good publication volume with some International impact.
Sufficient	(2) Research has limited publication volume with less International impact.
Insufficient	(1) Research has very limited publication and lacks international impact.

If the research to be evaluated has a strict national character the international impact is irrelevant and the quality and out-put has to be considered by comparing the research with similar research/research environments in other countries.

For bibliometrics grading (1-5) (Peter van den Besselaar)

For significance in education and teaching grading (high, moderate, low) (Kenneth Nordgren)

Contacts

For questions concerning the evaluation material please turn to malin.masterton@oru.se or sofia.sodin@oru.se

The panel chair professor Dan Brändström can be reached also by phone +46 (0)70-6484750

For questions and clarification of bibliometric matters please contact ulf.sandstrom@oru.se

General questions can be addressed to me gunilla.lindstrom@oru.se +46 (0)73-2761098

Kindly,

Gunilla Lindström

Chair of the ORU2015 Steering Group

Assignments as Rapporteur 1 and 2

	Rapporteur 1	Rapporteur 2
A. Faculty of Business, Science and Engineering		
SUBUNITS		
A.1. BUSINESS ADMINISTRATION	Lars Hassel	Kimmo Nuotio
A.2. ECONOMICS AND STATISTICS	Lars Hassel	Kimmo Nuotio
A.3. INFORMATICS	P v d Besselaar	Catarina Coquand
A.4. BIOLOGY	Stefan Nordlund	Anders Ekbohm
A.5. CHEMISTRY	Stefan Nordlund	Anders Ekbohm
A.6. MATHEMATICS, PHYSICS, DIDACTICS IN MATH etc.	Kenneth Nordgren	Stefan Nordlund
A.7. COMPUTER SCIENCE	Catarina Coquand	Hans Johannesson
A.8. MECHANICAL ENGINEERING	Hans Johannesson	Catarina Coquand
B. Faculty of Humanities and Social Sciences		
SUBUNITS		
B.1. CULINARY ARTS AND MEAL SCIENCE	Leif Lewin	Stefan Nordlund
B.2. HISTORY	Kenneth Nordgren	Gudrun Dahl
B.3. LANGUAGE STUDIES	Kenneth Nordgren	Gudrun Dahl
B.4. MEDIA AND COMMUNICATION STUDIES	P v d Besselaar	Catarina Coquand
B.5. MUSICOLOGY	Gudrun Dahl	Kenneth Nordgren
B.6. RHETORICS	P v d Besselaar	Gudrun Dahl
B.7. COMMUNICATION, CULTURE AND DIVERSITY	Gudrun Dahl	Kenneth Nordgren
B.8. EDUCATION	Kenneth Nordgren	Kimmo Nuotio
B.9. GENDER STUDIES	Gudrun Dahl	P v d Besselaar
B.10. HUMAN GEOGRAPHY	Leif Lewin	Lars Hassel
B.11. POLITICAL SCIENCE	Leif Lewin	Kimmo Nuotio
B.12. SOCIOLOGY	Leif Lewin	I Rahm Hallberg
B.13. CRIMINOLOGY	Alexander von Eye	Kimmo Nuotio
B.14. LEGAL SCIENCE	Kimmo Nuotio	Leif Lewin
B.15. PSYCHOLOGY/CHAMP	Alexander von Eye	Anders Ekbohm
B.16. SOCIAL WORK	Gudrun Dahl	I Rahm Hallberg
B.17. YOUTH & SOCIETY	Alexander von Eye	Leif Lewin
C. Faculty of Medicine and Health		
SUBUNITS		
C.1. BIOMEDICINE	Anders Ekbohm	Torben Schroeder
C.2. MEDICINE	Torben Schroeder	Anders Ekbohm
C.3. DISABILITY SCIENCE	I Rahm Hallberg	Torben Schroeder
C.4. NURSING SCIENCE	I Rahm Hallberg	Alexander von Eye
C.5. OCCUPATIONAL THERAPY	I Rahm Hallberg	Alexander von Eye
C.6. PUBLIC HEALTH SCIENCE	Anders Ekbohm	I Rahm Hallberg
C.7. SPORT SCIENCE	Kenneth Nordgren	I Rahm Hallberg

Please note: Leif Lewin was later replaced by Katarina Eckerberg as a panellist.

ORU2015

Assessment of research at Örebro University 2008-2014

Dear ORU2015 Panelist,

By now you should have received the evaluation material sent to you last week. I hope you find it and the instructions useful for your evaluation.

Yesterday your chair professor Dan Brändström, dan.brandstrom@telia.com and I had a meeting to discuss the panel's assignment and program.

There are three things we would like to draw your attention to at this point.

First, Dan Brändström suggests that those of you who arrive in time on to 20th to join him for an informal dinner at 19 o'clock. carina.gavlefors@oru.se takes care of the reservation for you.

Second, to be sure he has the possibility to go through the assigned Rapporteurs' draft statements would you please be so kind and send them to malin.masteron@oru.se before the 20th of October (not as announced before).

Third, this concerns the evaluation unit RÖL (Region Örebro län) i.e. research performed at the University Hospital (USÖ) and where the researchers are not affiliated to ORU and do not belong to the Faculty of Medicine and Health. For RÖL there is only bibliometric data and self-evaluations included in the evaluation material. We regret that this information was not included in the previous list of Assignments as Rapporteur 1 and 2. Below you find the RÖL subunits and their Rapporteurs.

RÖL (Region Örebro län)	Rapporteur 1	Rapporteur 2
SUBUNITS		
RÖL 1. BIOMEDICINE	Anders Ekbohm	Torben Schroeder
RÖL 2. MEDICINE	Anders Ekbohm	Torben Schroeder
RÖL 3. SURGERY	Torben Schroeder	Anders Ekbohm
RÖL 4. SIDR	I Rahm Hallberg	Alexander von Eye
RÖL 5. NURSING	I Rahm Hallberg	Alexander von Eye
RÖL Total Assessment unit	Anders Ekbohm	I Rahm Hallberg

Kindly,

Gunilla Lindström, Chair of the Steering Group

Annex C: Research Funding at Örebro University 2014 [in Swedish]

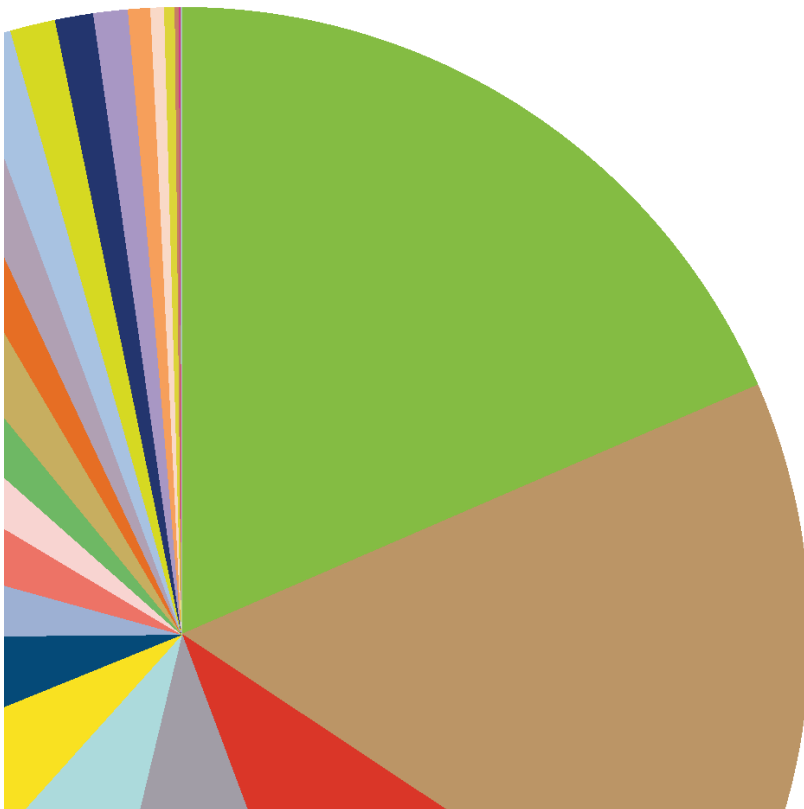


GRANTSOFFICE@ORU.SE

... en självklar del av forskningsprocessen

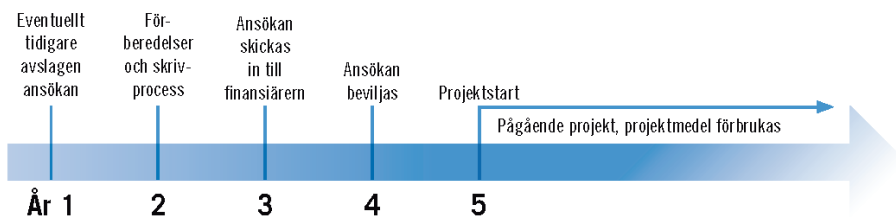


FORSKNINGSFINANSIERING VID ÖREBRO UNIVERSITET 2014



Sammanställt hösten 2015 av Grants Office
med data från verksamhetsdialogen 2014.

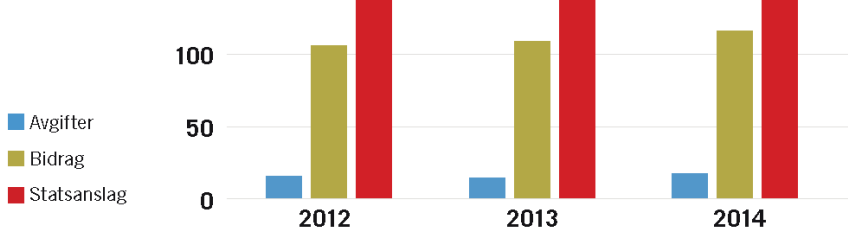
Från ansökan till projektmedel, ett exempel



Vägen från ansökan till förbrukade medel kan vara lång. Det är inte ovanligt att samma ansökan arbetas om flera gånger innan den beviljas. I statistiken från verksamhetsdialogen är det förbrukade medel som visas.

ORU INTÄKTER 2012-2014

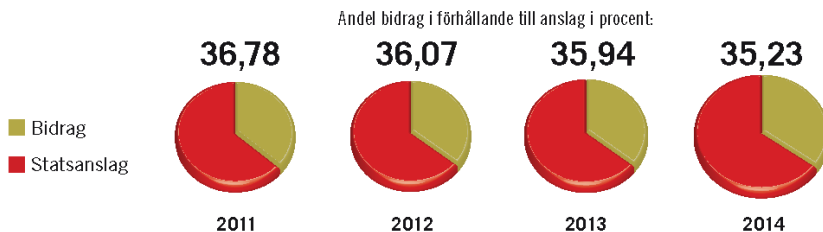
Avgifter, bidrag och statsanslag i miljoner kronor.



Under perioden 2012-2014 har statsanslaget ökat, särskilt 2014, medan de externa medlen (bidragen) har legat relativt konstant. Avgifter (inkomster från uthyrning, uppdrag etc.) har legat konstant lågt.

	2012	2013	2014
Intäkter av avgifter (kr)	16 162 872	14 804 667	17 749 463
Intäkter av bidrag (kr)	108 587 844	111 658 255	119 094 744
Intäkter av anslag (kr)	192 466 901	199 056 631	218 950 721
Summa (kr)	317 217 617	325 519 553	325 519 553

BIDRAG I FÖRHÅLLANDE TILL ANSLAG 2011-2014



Andelen bidrag i förhållande till anslagen har minskat mellan 2011 och 2014 vilket är negativt.

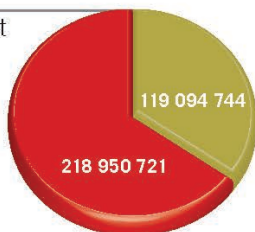
BIDRAG I FÖRHÅLLANDE TILL ANSLAG 2014

■ Bidrag

■ Statsanslag

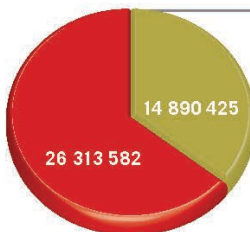
Örebro universitet
totalt

35 %



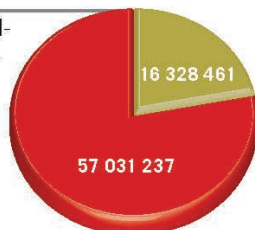
Handelshögskolan

36 %



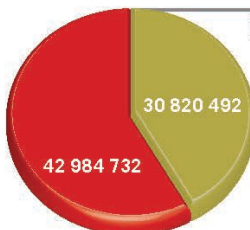
Humaniora, Utbildnings- och Samhällsvetenskap

22 %



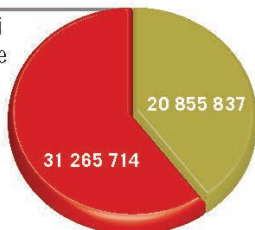
Hälsvetenskap och Medicin

42 %



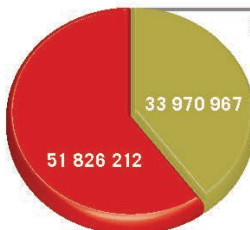
Juridik, Psykologi och Socialt arbete

40 %



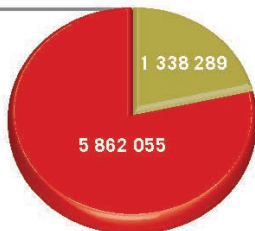
Naturvetenskap och teknik

40 %



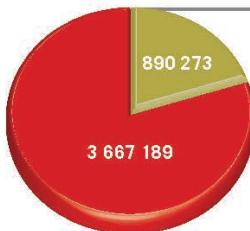
Musikhögskolan

19 %



Restaurang- och Hotellhögskolan

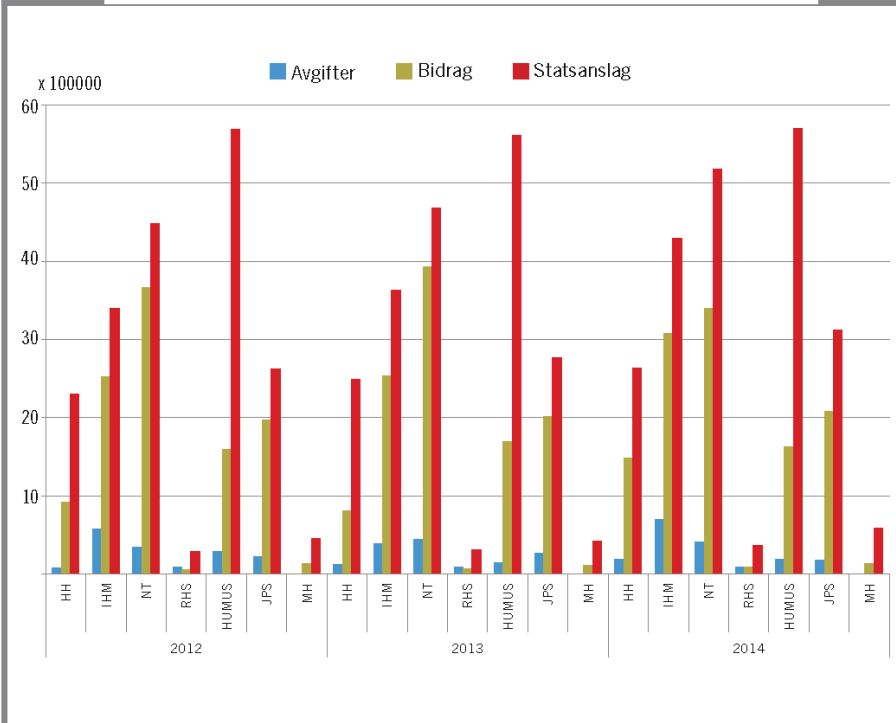
20 %



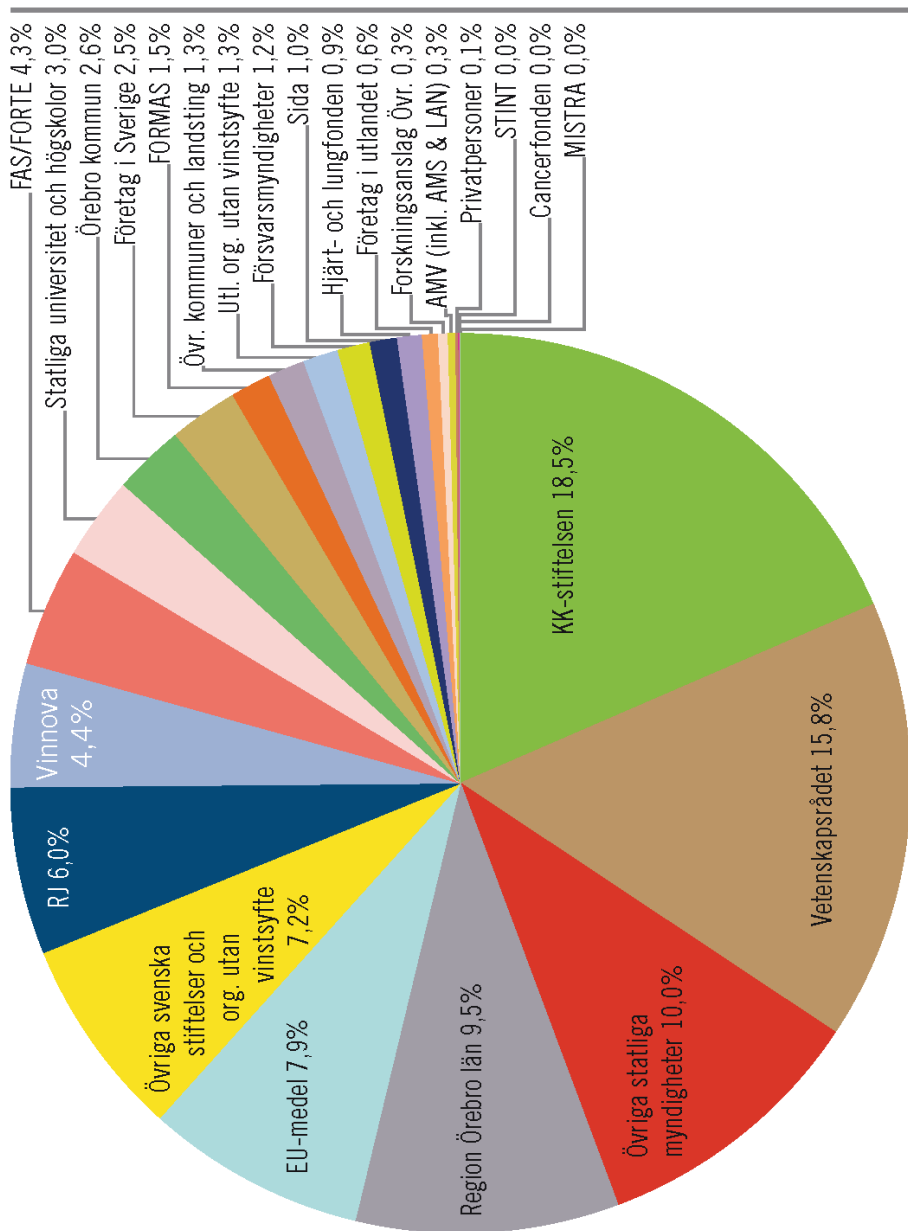
Diagrammens gröna del visar andelen bidrag i förhållande till statsanslag. En önskvärd utveckling är att öka andelen bidrag.

BIDRAG I FÖRHÅLLANDE TILL ANSLAG 2014

	Intäkter av avgifter	Intäkter av bidrag	Intäkter av anslag	
HH	1 922 957	14 890 425	26 313 582	36 %
HUMUS	1 919 511	16 328 461	57 031 237	22 %
IHM	7 005 682	30 820 492	42 984 732	42 %
JPS	1 838 965	20 855 837	31 265 714	40 %
NT	4 092 563	33 970 967	51 826 212	40 %
MH	7 722	1 338 289	5 862 055	19 %
RHS	962 063	890 273	3 667 189	20 %



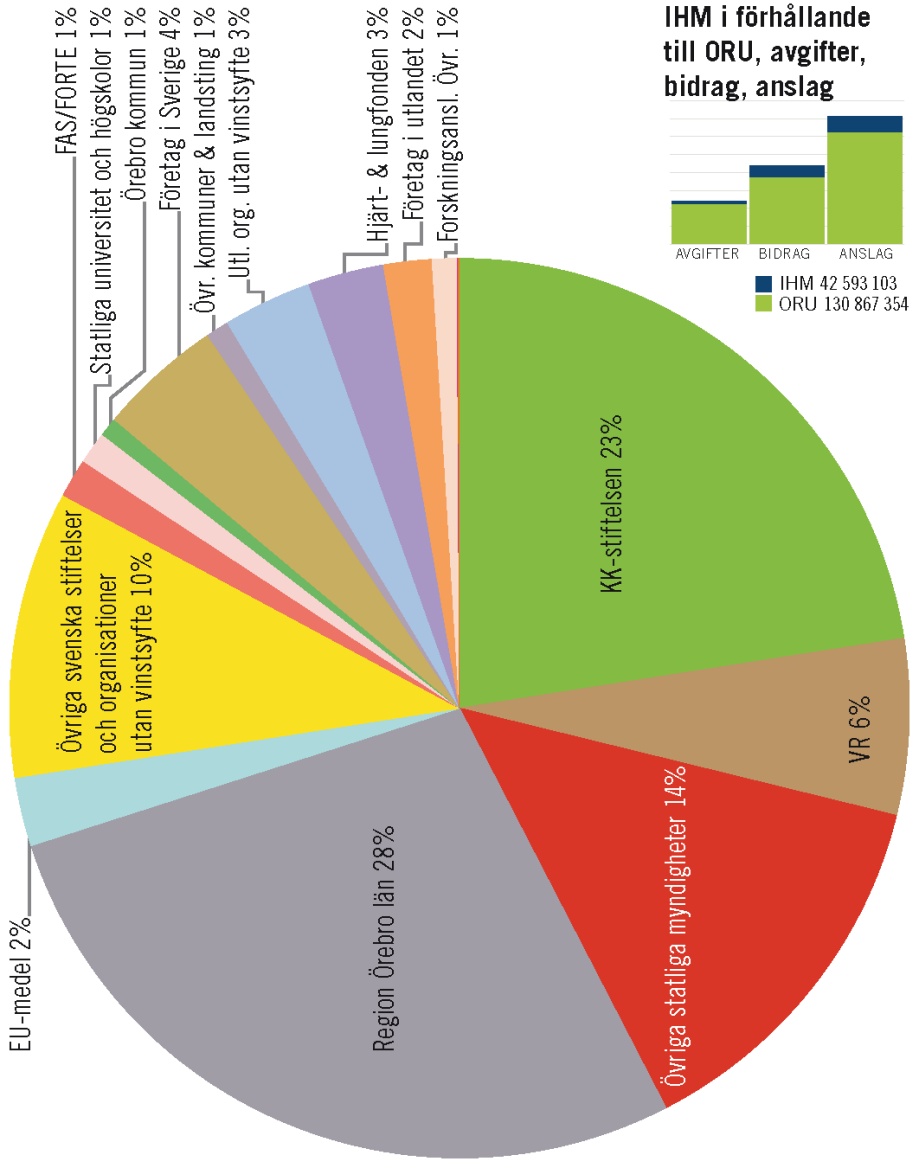
Förhållandet mellan bidrag och anslag varierar mellan institutionerna. De blå staplarna representerar avgifter (inkomster från uthyrning, uppdrag etc).



EXTERNA FINANSIÄRER ÖREBRO UNIVERSITET 2014

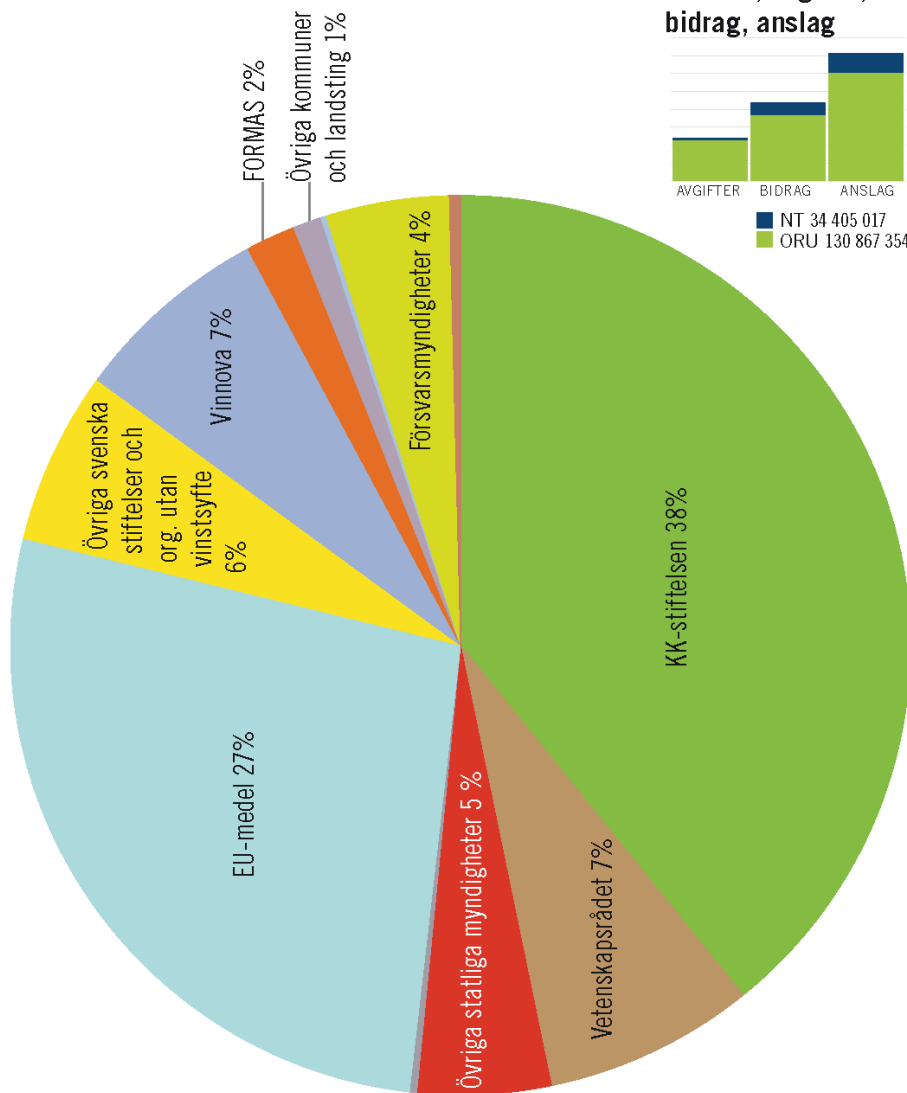
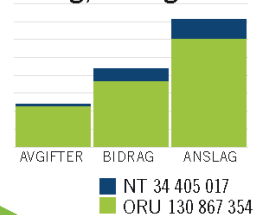
	HH	IHM	NT	RHS	HUMUS	JPS	MH	Summa
KK-stiftelsen	1 128 466	9 588 729	13 482 502					24 159 696
Vetenskapsrådet	1 643 795	2 692 270	2 604 890		6 935 266	6 167 753	6 887 483	20 731 457
Övriga statliga myndigheter	2 618 341	5 784 913	1 649 372	306 175	733 553	1 964 798		13 057 152
Region Örebro län (tidigare Örebro läns landsting)	50 316	11 772 610	90 788			454 455		12 368 169
EU-medel	-561 427	1 052 679	9 290 784		523 916	3 684		10 319 636
Övriga svenska stiftelser och org. utan vinstsyfte	1 546 827	4 398 991	2 141 966	584 098	142 055	613 954		9 427 880
Riksbankens jubileumfond	1 465 947				361 495	5 425 010	611 668	7 864 120
Vinnova/Nutek	542 064		2 448 587		2 434 468	391 079		5 816 198
FAS/FORTE	447 916	597 066			417 073	4 129 943		5 591 998
Statliga universitet och högskolor	1 747 504	494 005	-258 789		1 618 638	281 432		3 882 790
Örebro kommun	534 049	288 647	-72 645		1 917 042	675 124		3 342 217
Företag i Sverige	1 372 669	1 901 132	-102 616	0		54 962		3 226 146
FORMAS			617 488		896 401	391 079		1 904 968
Övriga kommuner och landsting	1 040 743	350 069	350 502		-11 817			1 729 496
Utländska organisationer utan vinstsyfte		1 360 019	68 786			232 003		1 660 808
Försvarsmyndigheter			1 521 803					1 521 803
Sida	1 284 155							1 284 155
Hjärt- och lungfonden		1 159 267						1 159 267
Företag i utlandet	9 060	738 225						747 285
Forskningsanslag Övrigt	10 000	376 811				70 561		467 372
AMW (inkluderar AMS och LAN)					354 014			354 014
Privatpersoner			137 549					137 549
STINT Stift. för internationalisering av högre forskning		15 534					39 138	54 672
Cancerfonden		22 137						22 137
MISTRA, Stiftelsen för miljöstrategisk forskning					6 357			6 357
Länsstyrelser				0				0
Energimyndigheten								0
Summa	15 441 852	42 593 103	34 405 017	880 273	16 340 278	20 855 837	1 338 289	72 879 049

EXTERNA FINANSIÄRER IHM 2014

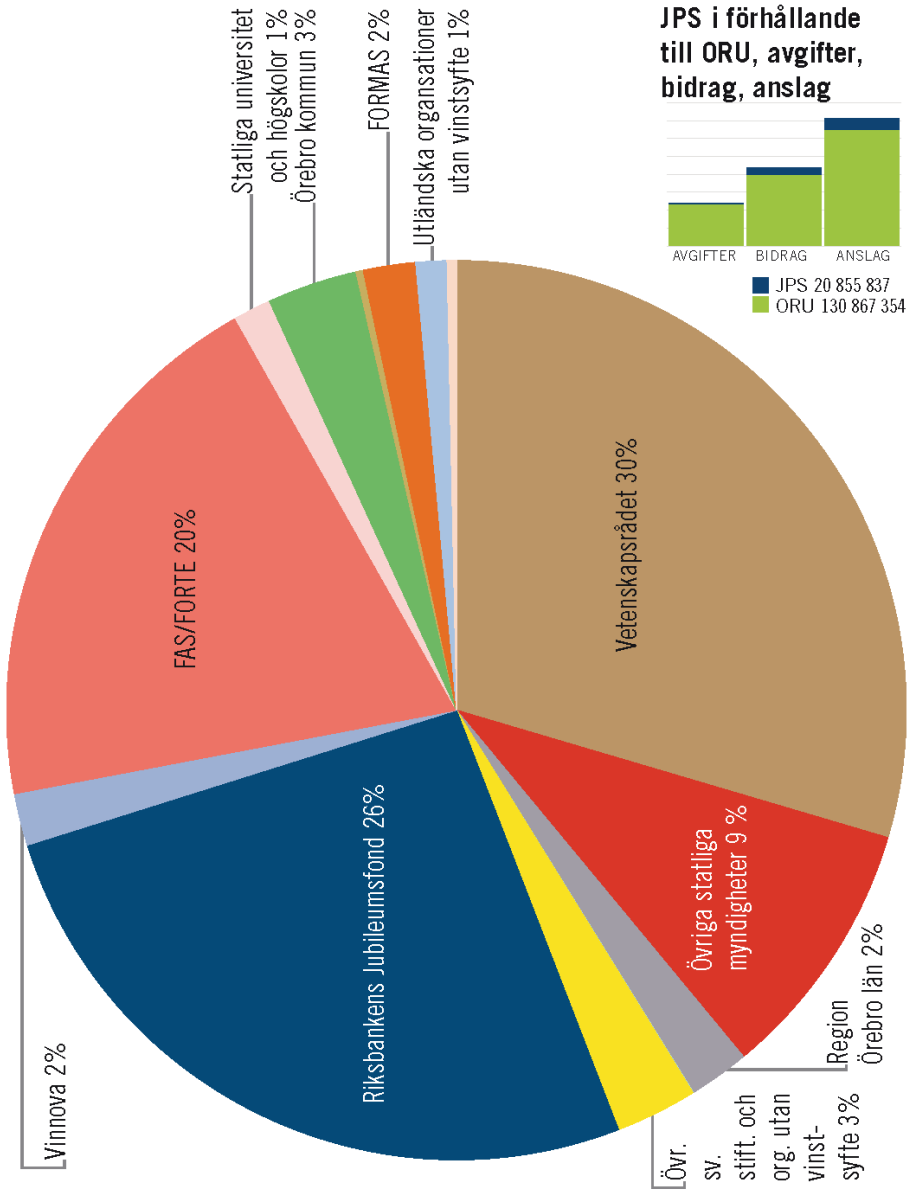


EXTERNA FINANSIÄRER NT 2014

NT i förhållande till ORU, avgifter, bidrag, anslag

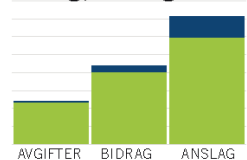


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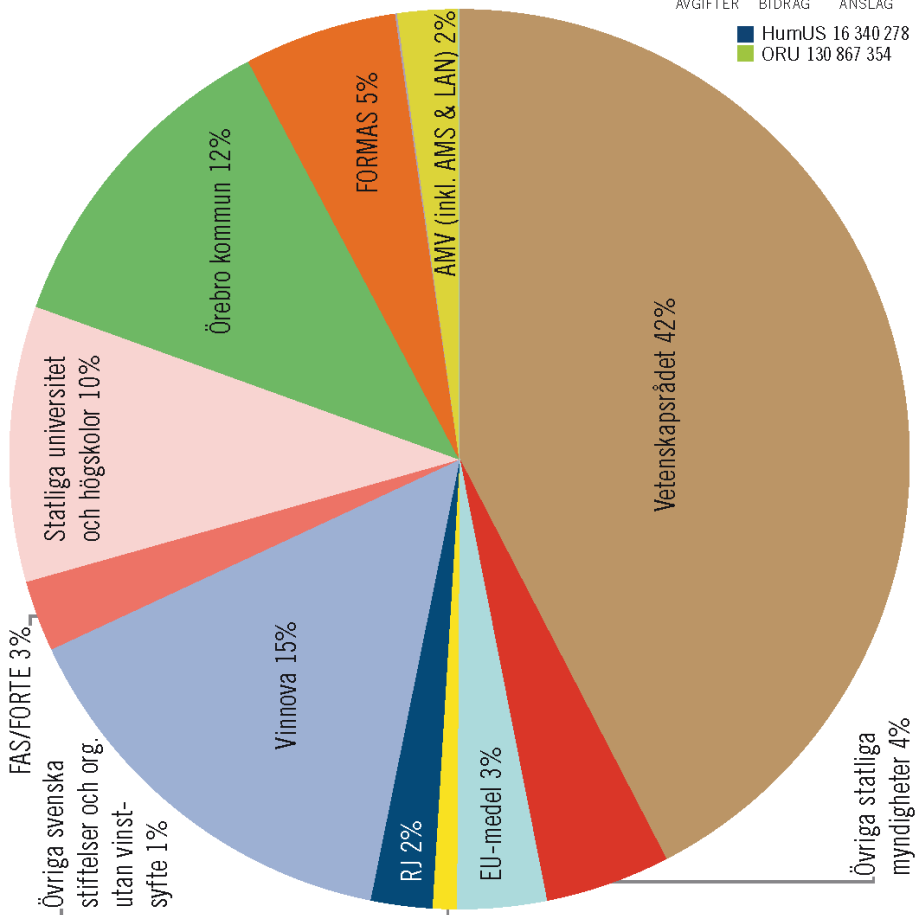


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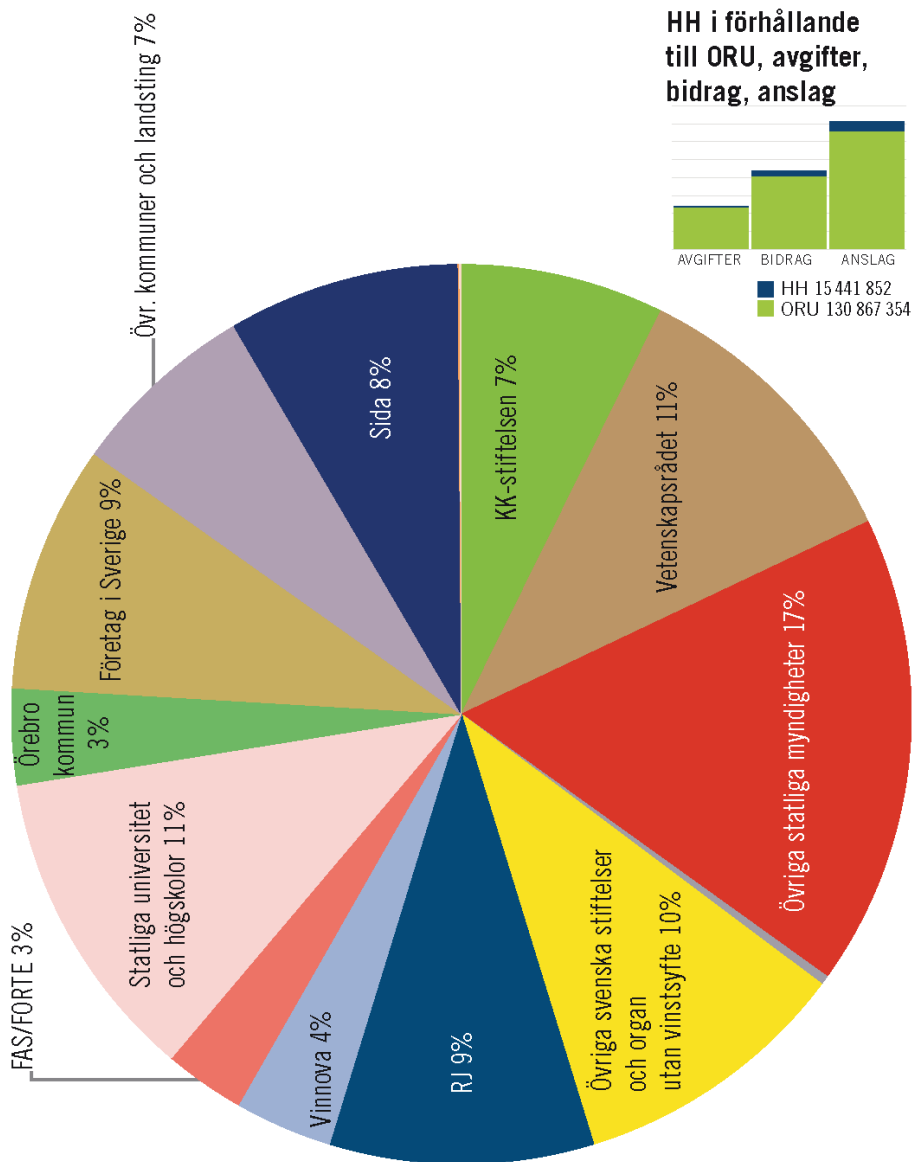
HumUS i förhållande till ORU, avgifter, bidrag, anslag



HumUS 16 340 278
ORU 130 867 354

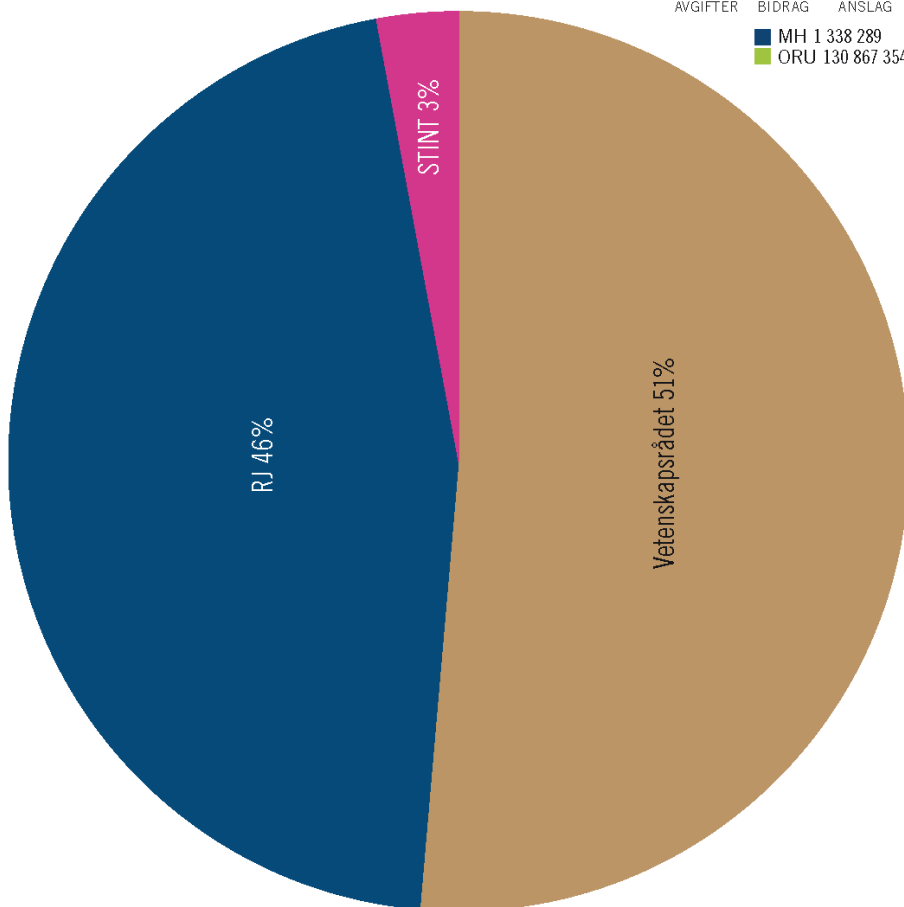
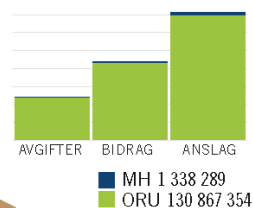


EXTERNA FINANSIÄRER HH 2014



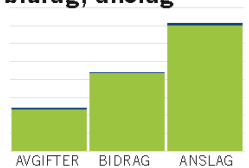
EXTERNA FINANSIÄRER MH 2014

MH i förhållande
till ORU, avgifter,
bidrag, anslag

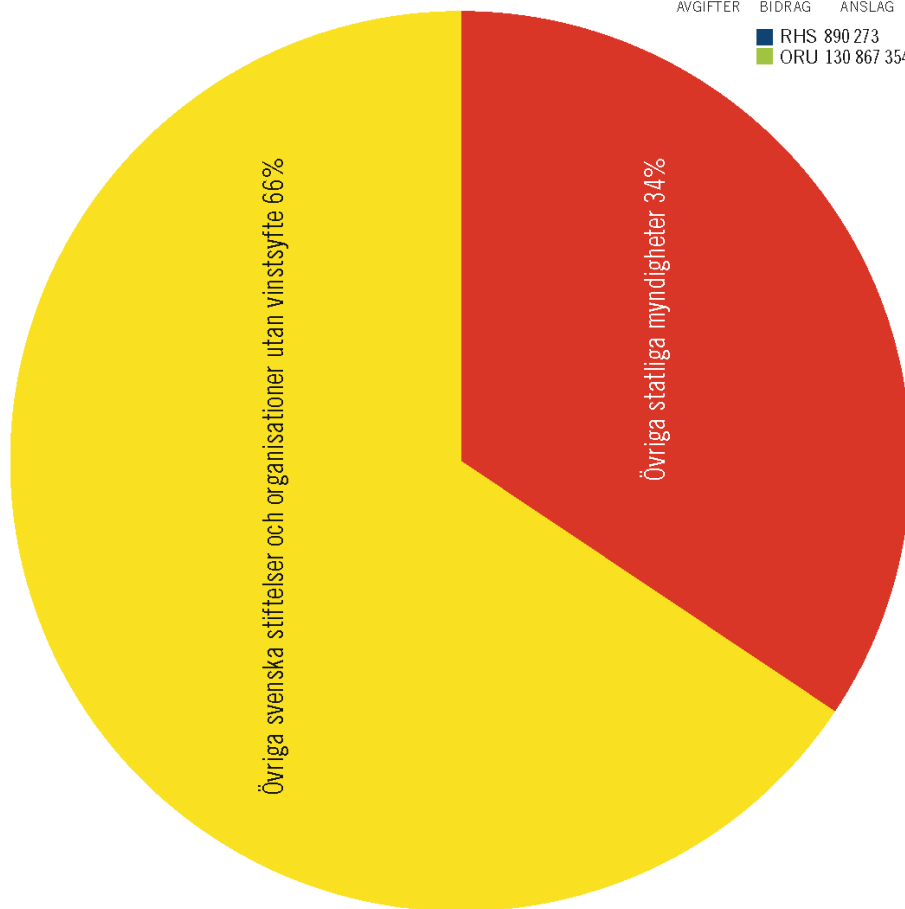


EXTERNA FINANSIÄRER RHS 2014

RHS i förhållande
till ORU, avgifter,
bidrag, anslag



RHS 890 273
ORU 130 867 354





Annex D: Parameters and Indicators

(1) Academic Staff

- Number of employees
- Relevant personal information (gender, age)
- ORCID
- Yearly research activity 2012 – 2014
- Job title
- Year of PhD award

PhD students were included in the material if they were not only registered at, but also employed by, Örebro University. The data was extracted from Primula (1 January 2015).

(2) Research

- Overview and description of research environments and research groups/themes
- Titles of current projects
- List of research funding bodies, with effect from 2014

The data was provided by the Executive and Faculty Office, the Finance Office and extracted from the Research Database (24 August 2015).

(3) PhD programme

- Number of research degrees awarded, 2008 – 2015

The data was provided by the Executive and Faculty Office.

(4) Internal and external funding

- Departmental Research Expenditures, 2008 – 2014
- Internal funding, 2015 (including data on faculty-funded employees).

The data was provided by the Finance Office.

(5) Self-evaluation

- Per unit (authored by the respective dean and head(s) of school)
- Per subunit (authored by the main researcher(s) in the subunit)

Based on the bibliometric report, the units/subunits were requested to perform a SWOT analysis, comment on scientific quality and impact, impact and outreach, internationalisation, research-education interaction, didactic research (when relevant).

(6) Bibliometric data

See Chapter 2 in this publication.

Annex E: The Bibliometric Report, a Summary and Score

The bibliometric report, a summary and score

Peter van den Besselaar

19/10/2015

In this short note I translate the bibliometric data in an evaluation score. This is done in the following way.

- The main issue is impact: the field normalized citation score and the share of top papers in the oeuvre of a unit (or person).
 - If the citation score is 1.00 (international average) we classify this as good. Lower than 0.8 is weak, better than 1.2 is very good, and above 1.4 is excellent.
 - However this is moderated by the share top papers (top 5% cited papers). A lower average impact (NCSf) can still be good, if the top 5% score is high (above 5%), and a high citation impact can be downgraded if there are no top cited papers.
- However, the productivity is also important, as (i) more publications means a higher impact, and (ii) small oeuvres with some high cited papers may result in a high impact score, but this is vulnerable. Productivity is field dependent, and therefore paper numbers are normalized in FAP scores: and then as the data show, the productivity should be at least be 1.5 – otherwise the productivity is weak
- Doing so classifies the 38 units in the following groups
 - Excellent: 4 units (11%)
 - Very good: 2 units (5%)
 - Good: 8 units (21%)
 - Moderate: 8 units (21%)
 - Weak: 16 units (42%)
- Of course, the WoS data only contain a (small) part of output, especially in social sciences and humanities. So the DIVA data may show additional information. The report has a field related reference value, and calculates the performance of the units related to these reference values.
 - For some units this makes a difference. Of the 8 in WoS moderate units, 3 have a DIVA score of 3 and higher (so at least good). And 4 score only a 1, and are at the non-WoS front weaker than in the WoS data.
 - Of the 16 units that perform weak in WoS, 10 perform also weak in DIVA, and 1 performs moderate. Only 4 of these units score good or very good in DIVA.
- Consequently, one may need to look more detailed at the DIVA output of 7 groups, as their performance in international science may be better than the WoS score suggests:
 - Criminology
 - Culinary arts and meal science

- Sport Science
- Culture, communication and diversity
- Gender studies
- Rethorics
- Law.

FIELD	SUB-UNIT	level	Score	Score	Productivity	Impact	Overall	Overall
			WoS	DIVA				
nat sci	chemistry	TOP10%	5	3	good	very good	excellent	good
med	rol-biomed	TOP25%	5		good	very good	excellent	
law etc	youth studies	TOP25%	5	1	moderate	very good	excellent	weak
med	medicine	TOP10%	5	1	moderate	very good	excellent	weak
law etc	champ	TOP10%	4	3	good	very good	very good	good
med	rol-surgery	TOP25%	4		good	very good	very good	
Soc sci	sociology	TOP25%	3	1	moderate	very good	good	weak
Hum	media & comm	TOP25%	3	4	good	good	good	very good
Med	rol-medicine	TOP25%	3		good	good	good	
Nat sci	biology	TOP25%	3	1	moderate	good	good	weak
health sci	rol-disabil	TOP50%	3		moderate	good	good	
Soc sci	political	TOP50%	3	1	moderate	good	good	weak
Nat sci	math-phys	TOP25%	3	1	moderate	good	good	weak
health sci	nursing sci	TOP50%	3	1	weak	good	good	weak
Soc sci	geography	TOP50%	2	1	weak	very good	moderate	weak
Hum	musicology	TOP50%	2	1	weak	very good	moderate	weak
law etc	criminology	TOP50%	2	4	weak	good/moderate	moderate	very good
business	economics	TOP10%	2	1	Good	Moderate	moderate	weak
health sci	sport sci	TOP50%	2	3	moderate	moderate	moderate	good
health sci	rol-nursing	TOP50%	2		moderate	moderate	moderate	
Hum	culinary	TOP50%	2	4	weak	moderate	moderate	very good
engineering	Computer	TOP50%	2	1	Weak	moderate	moderate	Weak
Soc sci	cult diversity	TOP50%	1	4	moderate	weak	weak	very good
Soc sci	gender	TOP50%	1	3	moderate	weak	weak	good
health sci	rol-occup the	TOP50%	1		good	weak	weak	
Hum	rhetorics		1	3	weak	weak	weak	good
law etc	law		1	3	weak	weak	weak	good
business	informatics	TOP50%	1	2	weak	weak	weak	moderate
health sci	sidr/disability	TOP50%	1	1	good	weak	weak	weak
Med	biomedicine	TOP50%	1	1	weak	weak	weak	weak
health sci	occup therapy	TOP50%	1	1	weak	weak	weak	weak
health sci	public health	TOP50%	1	1	moderate	weak	weak	weak
business	business adm	TOP50%	1	1	moderate	weak	weak	weak
law etc	socialwork	<top50%	1	1	weak	weak	weak	weak
Soc sci	education	<top50%	1	1	weak	weak	weak	weak
engineering	mechanical	<top50%	1	1	weak	weak	weak	weak
Hum	history		1	1	weak	weak	weak	weak
Hum	lang stud		1	1	weak	weak	weak	weak

Red: weak/moderate in both datasets

- For some units we can make a more detailed assessment based on the available data. Take e.g., *gender studies*. The DIVA data and the WoS data show that only one (guest) professor is responsible for two-third of the output. This holds even stronger for *culinary arts* and for *culture, communication and diversity*.

- In *rhetoric studies* there are no WoS data, and the DIVA score is mainly due to one researcher. International performance that may emerge from DIVA data is then restricted to this one person. However, almost all publications are in the lower level DIVA class, suggesting a low outreach – also internationally.
- Also in *law*, no WoS data are available. This is a very big unit, and some 85% of the publications are in the lower DIVA-class. Here we need further inspection of the DIVA data to show possible international impact.
- In *sport science*, the WoS visible researchers are also the better visible in DIVA, so including the latter may indeed show a higher international visibility. The same may be the case for *criminology*.

Short per unit:

The excellent units

Chemistry:

- A medium sized (15 persons) productive group (1.4 publication/person), with a very high citation impact – almost twice world average (1.86). The unit also has a high share (19%) in the top 5% cited papers. This is accompanied with a high (1.14) vitality of the research.
- In the DIVA data, the unit is at Swedish average.

Youth studies:

- A medium sized (10) moderately productive (1.2) group, with an excellent citation impact (1.58 times world average). The share in top cited papers is 13.3%.
- In DIVA, the score is weak, at 0.7 of Swedish average. Question is whether units with high scores in WoS metrics, do use DIVA intensively.

Medicine

- A very large (57) and moderately productive (1.2) unit. The citation impact is about one third above world average (1.33), and the unit has twice as many top cited papers (9.8%) than average.
- In DIVA, the group is weak at 0.7 of Swedish average.

Rol-biomed

- Medium sized (19) very productive (1.6) unit, with excellent (1.40) citation impact and excellent share (10.7%) in the top 5% cited papers. And vitality is high (1.14).
- In DIVA, the unit has no scores

The very good units

Champ

- Medium sized (15) productive (1.5) unit, with excellent (1.32) citation impact and very good share (6.7%) in the top 5% cited papers. And high (1.14) vitality.
- In DIVA, the unit scores at the Swedish average.

Rol-surgery

- A large (37) productive (1.4) unit with a very good citation impact (1.23) and a very good score in top cited papers (6.8%) and in vitality (1.09).
- The DIVA score is at Swedish average.

The good units

Media & communication

- Medium sized (14) very productive (1.7) unit, with good (1.09) citation impact but lacking top papers (only 1% in the top 5% cited papers). High (1.09) vitality.
- In DIVA, the unit has excellent scores, 40% above Swedish average.

Sociology

- Medium sized (16) moderately productive (1.0) unit, with very good (1.24) citation impact and excellent share in top papers (8.4% in the top 5% cited papers). The not too high productivity is a potential risk.
- In DIVA, the unit has weak scores, 30% below Swedish average.

Biology

- Medium sized (10) moderately productive (0.9) unit, with good (1.09) citation impact and very good share in top papers (7.6% in the top 5% cited papers). The not too high productivity is a potential risk.
- In DIVA, the unit has weak scores, 40% below Swedish average.

Nursing

- A large (26) but weakly productive (0.8) unit, with good (1.01) citation impact and good share in top papers (5.6% in the top 5% cited papers). The not too high productivity is a potential risk.
- In DIVA, the unit has weak scores, 40% below Swedish average.

Math/physics

- A medium sized (14) moderately productive (0.9) unit, with just good (0.82) citation impact and good share in top papers (4.5% in the top 5% cited papers). The not too high productivity is a potential risk.
- In DIVA, the unit has weak scores, 40% below Swedish average.

Rol-medicine

- A very large (69) productive (1.4) unit, with good (1.10) citation impact and good to very good share in top papers (5.8% in the top 5% cited papers).
- In DIVA, the unit has no scores.

Rol-disability

- A small (7) moderately productive (1.0) unit, with an excellent (almost 2.0) citation impact and a good share in top papers (4.8% in the top 5% cited papers). The size of the group, compared with the moderate productivity is a risk. Also the share of top papers is in absolute numbers low.
- In DIVA, the unit has no scores.

Political science

- A medium sized (10) moderately productive (0.9) unit, with a good impact (0.93) and a good share (6.4%) of top 5% cited papers. Vitality is good (1.06). At the individual level, quite some researchers do not have WoS scores, and the performance differences within the not very large unit are large.
- In DIVA, the unit scores weak, about 20% below Swedish average.

The moderately performing units

Criminology

- A rather small (5) low productive (0.6) unit, with good (1.16) citation impact but a low share in top papers (2.2% in the top 5% cited papers). The size of the group, compared with the moderate productivity is a risk. Also the share of top papers is numbers low.
- In DIVA, the unit scores very good, about 30% above Swedish average.

Culinary arts

- A small (9) low productive (0.5) unit, with good (0.87) citation impact but a complete lack of top papers.
- In DIVA, the unit scores very good, about 30% above Swedish average.

Sports science

- A medium sized (12) moderately productive (1.0) unit, with a good (1.07) citation impact and a moderate to low share (2.4%) in top 5% papers.
- In DIVA, the unit has a good score, 10% above Swedish average.

Computer science

- Medium sized (21) weak productive (0.8) unit, with a good (0.91) citation impact but a complete lack of top 5% cited papers. Vitality is high (1.09).
- In DIVA, the unit scores weakly, about 30% below Swedish average.

Economics

- Medium sized (18) very productive (1.9) unit, with a good (0.82) citation impact but a low share (2.2%) of top 5% cited papers. Vitality is low (0.95). At the individual level, the performance scores strongly vary within the unit.
- In DIVA, the unit scores weakly, about 40% below Swedish average.

Geography

- A small (5) extremely low productive (0.2) unit, with a very high impact (1.81) an extremely large share (16.7%) of top 5% cited papers. Vitality is low (0.95). The high impact scores are based on only three papers, and this low productivity is a problem.
- Also in DIVA, the unit scores extremely weakly (0.10).

Musicology

- The same pattern as in geography. A very high impact (3.17) and 14.3% top cited papers. However, this is based on a small group (9) with a very low productivity (0.4). Also here, the high impact is based on few papers in a 5 years period.
- In DIVA, the unit scores weak, about 20% below Swedish average.

Rol-nursing

- Medium sized (19) moderately productive (1.0) unit, with a good (0.87) citation impact but a low share (2.7%) of top 5% cited papers.
- In DIVA, the unit has no scores.

The weakly performing units

Communication and cultural diversity

- Very small group (2) with only a few papers (2) without any citation impact. This unit is too small for a meaningful evaluation.
- The DIVA score (1.4) is very good – but most papers are in the lower classified media.

Gender studies

- Medium sized (11) unit, moderately productive (1.0). Papers have moderate citation impact (0.79) and top cited papers are absent.
- The DIVA scores are good, about 10% above average.
- However, in this group, two-third of all publications are authored by one researcher, a fixed-term visiting professor.

Rhetoric studies

- Very small group (3) without WoS publications. This unit is too small for a meaningful evaluation. Their dominant research theme is crisis communication, which is also a dominant theme in the media unit.
- The DIVA score (1.0) is good, but 20 out of 21 papers are in the lower classified media.

Law

- Big group (22) without WoS publications.
- The DIVA score (1.2) is good, but 85% of the papers are in the lower classified media.

Informatics

- Medium size (13) unit with low productivity (0.7). Weak impact (0.55) and no top cited papers. Vitality is good (1.05)
- DIVA is moderate (0.8).

Biomedicine

- Large (26) unit with low to moderate productivity (0.8). Weak impact (0.53) and almost no top cited papers.
- DIVA is very weak (0.3).

Occupational Therapy

- Small (6) unit with low to moderate productivity (0.8). Weak impact (0.49) and hardly (1.5%) top cited papers. Vitality is good (1.05)
- DIVA is very weak (0.5).

Public Health

- Small size (9) unit with moderate productivity (1.0). Weak impact (0.50) and no top cited papers. Vitality is good (1.06).
- DIVA is weak (0.6).

Business Administration

- Large size (22) unit with moderate productivity (1.0). Weak impact (0.63) and hardly (0.4%) top cited papers. Vitality is moderate (0.97)
- DIVA is moderate to weak (0.7).

Social Work

- Medium size (12) unit with very low productivity (0.3). Very weak impact (0.44) and no top cited papers. Vitality is very good (1.13)
- DIVA is very weak (0.4).

Education

- Medium to large size (19) unit with very low productivity (0.3). Weak impact (0.54) and no top cited papers. Vitality is weak (0.91).
- DIVA is very weak (0.4).

Mechanical Engineering

- Small (6) unit with very low productivity (0.4). Very weak impact (0.05) and no top cited papers. Vitality is low (0.90).
- DIVA is very weak (0.1).

Sidr/Disability

- Medium to small (9) unit with good productivity (1.2). Moderate to low impact (0.72) but no top cited papers.
- DIVA is weak (0.6).

History

- No WoS data.
- DIVA is weak (0.5).

Language Studies

- No WoS data.
- DIVA is very weak (0.2).

Rol - Occupational Therapy

- Very small (1) unit - too small to call a 'unit'. Very high productivity (1.9). Moderate to weak impact (0.66) and low share (1.8%) top cited papers. Vitality is good (1.07).
- No DIVA data

Annex F: List of AUID or ORU-ID and researchers, UoE, subunits

AUID	Name	UoE	Subunit	AUID	Name	UoE	Subunit
aaas	Andersson, Annika	ECON	Informatics	Arr	Arnrup, Kristina	RÖL	Medicine
aac	Avdic, Anders	ECON	Informatics	Asa	Astrom, Maria	RÖL	Medicine
aagn	Gustafson, Agneta	ECON	Business Adm.	asaffio	Saffiotti, Alessandro	ENGIN	Computer Science
aaht	Hickisch, Annika	HEALTH	Nursing Science	asfn	Flodin, Anders	HUM	Musicology
aak	Kroon, Åsa	HUM	Media and Comm. Studies	asn	DeLeon, Alex	HEALTH	Surgery
aako	Kristoffersson, Annica	ENGIN	Computer Science	asnn	Nilsson, Andreas	HEALTH	Sport Science
aapo	H Persson, Annina	LPS	Legal Science	aso	Sirsjö, Allan	HEALTH	Biomedicine
aasr	Schröder, Agneta	HEALTH	Nursing Science	assm	Sjöström, Anders	HEALTH	Medicine
aat	Åquist, Ann-Cathrine	ED&SOC	Human Geography	aswn	Wedin, Åsa	ED&SOC	Education
aatn	Tollen, Anita	HEALTH	Occup. Therapy	atle	Linné, Agneta	ED&SOC	Education
aaun	Uddén, Anna	HUM	Language Studies	awf	Hurtig-Wennlöf, Anita	HEALTH	Biomedicine
aaav	Ananiev, Anani	ENGIN	Engineering	Axa	Axelsson, Sara	RÖL	Biomedicine
aba	Bouguerra, Abdelbaki	ENGIN	Computer Science	Axj	Axelsson, Kjell	RÖL	Surgery
abh	Bergh, Andreas	ED&SOC	Education	axpn	Persson, Alexander	HEALTH	Biomedicine
abm	Blom, Agneta	ED&SOC	Political Science	aye	Yngve, Agneta	HUM	Culinary Arts
abn	Bruhn, Anders	LPS	Social Work	azn	Zakrisson, Ann-Britt	HEALTH	Medicine
Abo	Abedi, Mohammad	RÖL	Medicine	Baa	Bazargani, Farhan	RÖL	Medicine
acdn	Danielsson, Annika	HUM	Musicology	bad	Andershed, Birgitta	HEALTH	Nursing Science
ackn	Kihlgren, Annica	HEALTH	Nursing Science	baed	Ejdervik-Lindblad, Birgitta	HEALTH	Medicine
aed	Englund, Anna-Lena	ED&SOC	Education	bag	Åberg, Berit	ED&SOC	Gender Studies
aefg	Forsberg, Anette	HEALTH	Medicine	baln	Wählin-Larsson, Britta	HEALTH	Sport Science
aesd	Strid, Åke	NAT	Chemistry	Ban	Backman, Anders	RÖL	Biomedicine
afan	Adolfsson, Annsophie	HEALTH	Nursing Science	Bau	Baumgart, Julianne	RÖL	Surgery
afed	Åklblad, Alf	NAT	Biology	bbn	Björkstén, Bengt	HEALTH	Medicine
afln	Lennqvist-Linden, Ann-Sofie	ED&SOC	Political Science	bdk	Danermark, Berth	HEALTH	Disability Science
aga	Gupta, Anil	HEALTH	n.a.	Be-	Bergemalm, P-O	RÖL	Disability Science
agd	Grönlund, Åke	ECON	Informatics	Bea	Berggren, Lars	RÖL	Surgery
agjn	Tinnfält, Agneta	HEALTH	Public Health Sciences	besr	Stålhammar, Börje	HUM	Musicology
Ahe	Ahlstrand, Rebecca	RÖL	Surgery	bhy	Horgby, Björn	HUM	History
ahg	Hertting, Anna	HEALTH	Public Health Sciences	Bja	Bjork, Tabita	RÖL	Nursing Science
Ahn	Ahlsson, Anders	RÖL	Surgery	bko	Bwira Kaboru, Berthollet	HEALTH	Nursing Science
Aho	Ahlgren, Johan	RÖL	Medicine	blsg	Sundberg, Bodil	NAT	Biology
Ahr	Ahlstrand, Erik	RÖL	Medicine	Blu	Blomqvist, Suzanne	RÖL	Nursing Science
Aia	Aila-Gustafsson, Sanna	RÖL	Nursing Science	bml	Mral, Brigitte	HUM	Rhetorics
aian	Kristianssen, Ann-Catrin	ED&SOC	Political Science	bnhr	Hammar, Björn	ED&SOC	Political Science
ain	Ivarsson, Ann-Britt	HEALTH	Occup. Therapy	bnjn	Johansson, Björn	LPS	Social Work
ajd	Jernudd, Åsa	HUM	Media and Comm. Studies	bnsn	Svensson, Björn	HEALTH	Medicine
ajr	Jonasdottir, Anna	ED&SOC	Gender Studies	boen	Edvardsson, Bo	LPS	Psychology
akan	Andershed, Anna-Karin	LPS	Psychology	bon	Bottiger, Anna	RÖL	Biomedicine
akm	Cater, Åsa	LPS	Social Work	Boo	Bohr, Johan	RÖL	Medicine
akv	Kiselev, Andrey	ENGIN	Informatics	bost	Söderquist, Bo	MED	Medicine
Ale	Almroth, Henrik	RÖL	Medicine	Bra	Breimer, Lars	RÖL	Medicine
ali	Loutfi, Amy	ENGIN	Computer Science	bse	Sorbe, Bengt	HEALTH	n.a.
alnd	Nordenskjöld, Axel	HEALTH	Medicine	btad	Allard, Bert	NAT	Chemistry
alr	Lunander, Anders	ECON	Econ. and Stat.	btgn	Gustavsson, Bernt	ED&SOC	Education
amll	Lilienthal, Achim	ENGIN	Computer Science	btjn	Johansson, Bengt	HEALTH	Surgery
amwn	Wallin, Anne-Marie	HEALTH	Nursing Science	bttn	Tellgren, Britt	ED&SOC	Education
amy	Mohamed-el-Gody, Ahmed	HUM	Media and Comm. Studies	bvl	Van Bavel, Bert	NAT	Chemistry
Ana	Andersson, Magnus	RÖL	Surgery	Caa	Carringer, Malcom	RÖL	Surgery
Ane	Andersson, Lena	RÖL	Biomedicine	caen	Arensmeier, Cecilia	ED&SOC	Political Science
Ang	Andersen-Carlsson, Agneta	RÖL	Disability Science	car	Akner_Koler, Cheryl	HUM	Culinary Arts
anin	Isaksson, Ann-Kristin	HEALTH	Nursing Science	Cav	Carlsson, Eva	RÖL	Nursing Science
ankn	Kärrman, Anna	NAT	Chemistry	cbg	Borneskog, Catrin	HEALTH	Nursing Science
anl	Norell-Clarke, Annika	LPS	Psychology	cbj	Bouij, Christer	HUM	Musicology
anln	Larsson, Anita	HEALTH	Public Health Sciences	cbn	Bartholdson, Catarina	LPS	Legal Science
Ano	Andersson, Sören	RÖL	Medicine	ccg	Carlsson Wetterberg, Christina	HUM	History
Ans	Andersson, Åsa	RÖL	Medicine	ccn	Callemann, Catharina	LPS	Legal Science
Anw	Andersson, Swen-Olof	RÖL	Surgery	cehn	Harrysson, Christer	ENGIN	Engineering
aoa	O'Hara, Andrew	NAT	Chemistry	cern	Roman, Christine	ED&SOC	Sociology
aom	Öström, Åsa	HUM	Culinary Arts	chm	Holm, Claes	LPS	Social Work
Ape	Appelros, Peter	RÖL	Medicine	cien	Eriksson, Charli	HEALTH	Public Health Sciences
aqt	Quennerstedt, Ann	ED&SOC	Education	cimr	Mörner, Cecilia	HUM	Media and Comm. Studies
aran	Ahlsson, Anders	HEALTH	Surgery	cjn	Johanzon, Conny	ECON	Business Adm.
arl	Roosvall, Anna	HUM	Media and Comm. Studies	clm	Lidström, Carina	HUM	Language Studies
arr	Rotander, Anna	NAT	Biology	cln	Ljunggren, Carsten	ED&SOC	Education
				clpn	Pettersson, Camilla	HEALTH	Public Health Sciences

cman	Andersson, Camilla	ECON	Econ. and Stat.	garm	Eliason, Gabriella	HEALTH	Biomedicine
cmr	Möller, Claes	HEALTH	Medicine	gbk	Björk, Gunnela	HUM	History
cnan	Hjorth-Aronsson, Christina	LPS	Social Work	Gea	Geijer, Håkan	RÖL	Medicine
cnfn	Fredriksson, Carin	HEALTH	Disability Science	gean	Andersson, Gunnel	HEALTH	Nursing Science
cog	Öberg, Christina	ECON	Business Adm.	gek	Ekbäck, Gunnar	HEALTH	Medicine
Cra	Crommert Eriksso, Martin	RÖL	Medicine	ghs	Helenius, Gisela	MED	Medicine
cren	Ericsson, Christer	HEALTH	Sport Science	gjl	Jarl, Gustav	HEALTH	Medicine
Crr	Crafoord, Kristina	RÖL	Surgery	glan	Ahlsén, Gunilla	HEALTH	Medicine
csgn	Gunnarsson, Claes	ECON	Business Adm.	gld	Lind, Göran	LPS	Legal Science
cshn	Hultman, Claes	ECON	Business Adm.	glkn	Karlsson, Gunnel	ED&SOC	Gender Studies
ctd	Tuvblad, Catherine	LPS	Criminology	glm	Lindström, Gunilla	NAT	Chemistry
ctk	Tysk, Curt	HEALTH	Medicine	gnen	Eriksson, Göran	HUM	Media and Comm. Studies
cylid	Lövbrand, Conny	HEALTH	Nursing Science	gnln	Liljgren, Göran	HEALTH	Surgery
Daa	Davidsson, Sabina	RÖL	Biomedicin	gnn	Nilsson, Gunvor	HUM	Language Studies
daan	Andrén, Daniela	ECON	Econ. and Stat.	Gra	Granberg, Sarah	RÖL	Disability Science
ddv	Driankov, Dimitar	ENGIN	Computer Science	gran	Andersson, Greger	HUM	Language Studies
dfs	Farkas, Daniel	NAT	Chemistry	grar	Åkner, Gunnar	HEALTH	Medicine
dlan	Alsarve, Daniel	HUM	History	grm	Wennblom, Gabriella	ECON	Business Adm.
dlsn	Sjödín, Daniel	ED&SOC	Sociology	grs	Roomans, Godfried	MED	Medicine
dln	Machin, David	HUM	Media and Comm. Studies	guhdt	Hedlund, Gun	ED&SOC	Political Science
dlnj	Johansson, Dan	ECON	Econ. and Stat.	Gun	Gupta, Anil	RÖL	Surgery
Dra	Dreifaldt, Mats	RÖL	Surgery	Haa	Hagstrom, Katja	RÖL	Biomedicin
drr	Repsilber, Dirk	HEALTH	Medicine	had	Andershed, Henrik	LPS	Psychology
dsy	Stranneby, Dag	ENGIN	Engineering	Hae	Hardell, Lennart	RÖL	Medicine
Dun	Duberg, Ann-Sofi	RÖL	Medicine	Hai	Hagnelius, Nils-Olof	RÖL	Medicine
eaa	Amná, Erik	ED&SOC	Political Science	hakn	Kälvegren, Hanna	HEALTH	Biomedicine
eae	Kristoffersson, Eleonor	LPS	Legal Science	Han	Hammer, Ann	RÖL	Medicine
eael	Engdahl, Emma	ED&SOC	Sociology	hasn	Sunvisson, Helena	HEALTH	Nursing Science
eagn	Gustavsson, Eva	ED&SOC	Human Geography	hed	Englund, Hans	ECON	Business Adm.
eak	Arneback, Emma	ED&SOC	Education	Hee	Hellmark, Bengt	RÖL	Biomedicin
easl	Särndahl, Eva	MED	Medicine	Hei	Hermansson, Liselotte	RÖL	Occup. Therapy
ecbm	Borgström, Eric	HUM	Language Studies	hel	Edebol-Carlman, Hanna	HEALTH	Medicine
ecn	Carlsson, Eva	HEALTH	Nursing Science	hkan	Andreasson, Henrik	ENGIN	Computer Science
Eda	Edvardsson, Tanja	RÖL	Nursing Science	hkf	Khalaf, Hazem	HEALTH	Biology
efe	Flygare, Erik	LPS	Social Work	hnan	Andersson, Helen	HUM	Media and Comm. Studies
egg	Georgii-Hemming, Eva	HUM	Musicology	hnbgt	Berg, Håkan	NAT	Biology
ehen	Ericsson, Elisabeth	HEALTH	Nursing Science	hngr	Geijer, Håkan	HEALTH	Surgery
ehg	Hysing, Erik	ED&SOC	Political Science	hnl	Nordvall, Henrik	ED&SOC	Education
ehsn	Svensson, Elisabeth	ECON	Statistics	hnsn	Stattin, Håkan	LPS	Psychology
eht	Hultgren-Hörnquist, Elisabeth	MED	Medicine	Hoa	Horer, Tal	RÖL	Surgery
Eji	Ejdervik-Lindblad, Birgitta	RÖL	Medicine	Hor	Hollandare, Fredrik	RÖL	Nursing Science
eka	Kolkowska, Ella	ECON	Informatics	hpn	Persson, Håkan	ECON	Econ. and Stat.
Eka	EKback, Maria	RÖL	Medicine	hra	Råihå, Helge	HUM	Language Studies
Eku	EKback, Gunnar	RÖL	Medicine	hshd	Hasselbladh, Hans	ECON	Business Adm.
Ele	Eliasson, Henrik	RÖL	Medicine	hss	Samzelius, Hanna	LPS	Social Work
Eil	Eliasson, Alf	RÖL	Medicine	hst	Schellwat, Holger	NAT	Mathematics, Physics
Eme	Emilsson, Kent	RÖL	Medicine	htn	Thorsen, Håkan	HEALTH	Nursing Science
eon	Oskarsson, Eva	HEALTH	Biomedicine	Hul	Hultgren, Olof	RÖL	Medicine
eoo	Ohlsson-Nevo, Emma	HEALTH	Nursing Science	Huv	Hugosson, Svante	RÖL	Surgery
ept	Ponsot, Elodie	HEALTH	Sport Science	hwg	Westberg, Håkan	NAT	Chemistry
Ese	Essving, Per	RÖL	Surgery	iafn	Fredriksson, Ingela	HEALTH	Public Health Sciences
esl	Tina, Elisabet	MED	Biomedicine	idan	Edvardsson, Ingrid	HEALTH	Public Health Sciences
Esl	Esbjörner, Elisabeth	RÖL	Medicine	iden	Ericson Jogsten, Ingrid	NAT	Chemistry
est	Schaffernicht, Erik	ENGIN	Computer Science	idl	Demirel, Isak	HEALTH	Biomedicine
ewl	Westerdahl, Elisabeth	HEALTH	Nursing Science	iejn	MJonsson, Inger	HUM	Culinary Arts
Faa	Farkas, Sanja	RÖL	Biomedicin	iem	Engström, Ingemar	HEALTH	Medicine
Fae	Fadl, Helena	RÖL	Surgery	ier	Elander, Ingemar	ED&SOC	Political Science
faga	Giannotta, Fabrizia	LPS	Psychology	ifk	Flink, Ida	LPS	Psychology
fhe	Holländare, Fredrik	HEALTH	Medicine	ijs	James, Inger	HEALTH	Nursing Science
fki	Kadi, Fawzi	HEALTH	Sport Science	ika	Kalbina, Irina	NAT	Chemistry
fkl	Klügl, Franziska	ENGIN	Informatics	ikn	Källström-Karlsson, Inga-Lill	HEALTH	Nursing Science
fkn	Karlsson, Fredrik	ECON	Informatics	ikv	Kalaykov, Ivan	ENGIN	Computer Science
Fon	Forsberg, Anette	RÖL	Medicine	inn	Nilsson, Inger	HEALTH	Nursing Science
fpa	Pecora, Federico	ENGIN	Computer Science	iöt	Unemar-Öst, Ingrid	ED&SOC	Education
fpt	Prenkert, Frans	ECON	Business Adm.	ipn	Petterson, Ingvor	HEALTH	Occup. Therapy
Fra	Fredlund, Hans	RÖL	Medicine	irl	Rangel, Ignacio	HEALTH	Medicine
Frr	Friberg, Örjan	RÖL	Surgery	isz	Schultz, Ida	HEALTH	Medicine
galg	A. Lundberg, Gunilla	HEALTH	Medicine	itgn	Gustafsson, Inga-Britt	HUM	Culinary Arts
gan	Abrahamsson, Gun	ECON	Business Adm.	jabd	Björklund, Johanna	NAT	Biology

jaen	Kask, Johan	ECON	Business Adm.	kjn	Johansson, Kjell	HEALTH	n.a.
jag	Alsarve, Jenny	ED&SOC	Sociology	kle	Lekare, Kerstin	ED&SOC	Sociology
jahg	Hagberg, Jessika	NAT	Chemistry	kmr	Möller, Kerstin	HEALTH	Disability Science
jahn	Hulldin, Johanna	HEALTH	Public Health Sciences	knf	Nordlöf, Kerstin	LPS	Legal Science
Jaj	Jansson, Kjell	RÖL	Surgery	knfg	Fröding, Karin	HEALTH	Public Health Sciences
jam	Åström, Joachim	ED&SOC	Political Science	knr	Neander, Kerstin	HEALTH	Medicine
Jat	Jansson, Stefan	RÖL	Medicine	knrg	Rudsberg, Karin	HEALTH	Sport Science
Jau	Jacobsson, Susanne	RÖL	Biomedicin	krfn	Falk-Brynhildsen, Karin	HEALTH	Nursing Science
jbr	Bohr, Johan	HEALTH	Medicine	krpn	Persson, Krister	ED&SOC	Human Geography
jbt	Bidot, Julien	ENGIN	Computer Science	kten	Emilsson, Kent	HEALTH	Medicine
jcg	Lagsten, Jenny	ECON	Informatics	ktfr	Fälker, Knut	HEALTH	Biomedicine
jcjn	Johansson, Jessica	HEALTH	Biomedicine	ktnn	Nilsson, Kerstin	MED	Surgery
jdr	Degner, Jürgen	LPS	Social Work	kzt	Ziegert, Kristina	HEALTH	Nursing Science
jebt	Baumgart, Julianne	HEALTH	Medicine	Laa	Larsson Lillsunde, Gabriella	RÖL	Biomedicin
jeh	E Kroth, Jesper	LPS	Legal Science	labn	Beckman, Linda	HEALTH	Public Health Sciences
jeje	Jensen, Jennie	HEALTH	Public Health Sciences	lagn	Gunnarsson, Lena	ED&SOC	Gender Studies
jeln	Levin, Jörgen	ECON	Econ. and Stat.	Lah	Larzon, Thomas	RÖL	Surgery
jfhn	Hearn, Jeff	ED&SOC	Gender Studies	lahn	Hedin, Lena	LPS	Social Work
jge	Greve, Jan	ECON	Business Adm.	lbd	Berglund, Louise	HUM	History
jgn	Gerdin, Jonas	ECON	Business Adm.	lcr	Camauer, Leonor	HUM	Media and Comm. Studies
Jie	Jildenstal, Pether	RÖL	Nursing Science	lct	Coniavitis-Gellerstedt, Lotta	HEALTH	Disability Science
jiin	Jonsson, Jessica	LPS	Legal Science	ldan	Andersson, Linda	ECON	Econ. and Stat.
jjl	Jönhill, Jan-Inge	ED&SOC	Sociology	lejn	Johnson, Lena	HUM	Musicology
jjr	Jouper, John	HEALTH	Sport Science	len	Erikson, Lars	ED&SOC	Education
jjs	Jass, Jana	NAT	Biology	leo	Ervo, Laura	LPS	Legal Science
jkg	König, Julia	HEALTH	Medicine	lgn	Gunnarsson, Lars-Gunnar	MED	Medicine
jkjn	Johansson, Jan-Erik	HEALTH	Surgery	lhu	Husu, Liisa	ED&SOC	Gender Studies
jkr	Kjellander, Johan	ENGIN	Engineering	lcn	Hultkrantz, Lars	ECON	Econ. and Stat.
jmln	Larsson, Joakim	ENGIN	Engineering	Lia	Linden-Bostrom, Margareta	RÖL	Medicine
jngn	Gustafsson, Johanna	HEALTH	Disability Science	lian	Ahonen, Lia	LPS	Criminology
jnn	Nilsson, Johan	HUM	Media and Comm. Studies	Lie	Lindner, Helen	RÖL	Disability Science
jnon	Olsson, Jan	ED&SOC	Political Science	Lii	Lindgren, Rickard	RÖL	Surgery
jnpe	Persliden, Jan	HEALTH	Surgery	Lij	Lindvall, Björn	RÖL	Medicine
jns	Nergelius, Joakim	LPS	Legal Science	Lio	Liljgren, Göran	RÖL	Surgery
jnsn	Stenersen, Johanna	HUM	Media and Comm. Studies	Liv	Lindberg, Eva	RÖL	Medicine
Joa	Johansson, Jan-Erik	RÖL	Surgery	lkn	Kjellin, Lars	HEALTH	Medicine
Joe	Johansson, Bengt	RÖL	Medicine	Loa	Lodefalk, Maria	RÖL	Medicine
joln	Lönn, Johanna	HEALTH	Biomedicine	lpd	Pejryd, Lars	ENGIN	Engineering
jon	Öhman, Johan	ED&SOC	Education	lrg	Hagberg, Lars	HEALTH	Public Health Sciences
Jon	Josefson, Anna	RÖL	Medicine	Iskn	Karlsson, Lars	ENGIN	Computer Science
jpa	Peralta, Julia	HEALTH	Disability Science	Isn	Skalin, Lars-Åke	HUM	Language Studies
jpn	Petersson, Johan	ECON	Informatics	Isnn	Norgren, Lars	HEALTH	Surgery
jrjn	Johansson, Jesper	HUM	Culinary Arts	lthn	Hermansson, Liselotte	HEALTH	Occup. Therapy
jrn	Rasmussen, Joel	HUM	Media and Comm. Studies	ltr	Tilton-Weaver, Lauree	LPS	Psychology
jshn	Halfvarson, Jonas	MED	Medicine	Lua	Lundqvist, Lars-Olov	RÖL	Disability Science
jujn	Enele, Jan-Magnus	ED&SOC	Sociology	Luo	Ludvigsson, Jonas	RÖL	Medicine
jkjn	Karlsson, Johnny	HEALTH	Medicine	lzl	Ljungberg, Liza	HEALTH	Biomedicine
kywl	Windahl, Jenny	HEALTH	Nursing Science	Maa	Makdoui, Karim	RÖL	Medicine
jza	Zila, Josef	LPS	Legal Science	Mae	Matthiessen, Peter	RÖL	Surgery
Kaa	Karlsson, Jan	RÖL	Medicine	mafm	Fernström, Maria	HEALTH	Biomedicine
kahn	Hjortgren, Katarina	LPS	Social Work	Mai	Magnusson, Niklas	RÖL	Surgery
kap	Arrnup, Kristina	HEALTH	n.a.	maso	Svantesson, Mia	HEALTH	Nursing Science
kapo	Persson, Katarina	MED	Biomedicine	mawl	Westvall, Maria	HUM	Musicology
kasg	Swartling-Widerström, Katarina	HEALTH	Public Health Sciences	mbg	Billing, Mischa	HUM	Culinary Arts
kba	Boersma, Katja	LPS	Psychology	mbk	Bask, Mikael	ECON	Econ. and Stat.
kbe	Boye, Katarina	ED&SOC	Sociology	mbi	Broxvall, Mathias	ENGIN	Computer Science
kg	Blomberg, Karin	HEALTH	Nursing Science	mbt	Björkqvist, Maria	MED	n.a.
kd	Dalal, Koustuv	HEALTH	Public Health Sciences	mcjn	Johansson, Monica	ED&SOC	Sociology
Keh	Kellerth, Thomas	RÖL	Medicine	mco	Cirillo, Marcello	ENGIN	Computer Science
kem	Engström, Karin	ED&SOC	Education	mdt	Lindberg, Mats	ED&SOC	Political Science
ket	Elgbratt, Kristina	HEALTH	Biomedicine	megg	Gelang, Marie	HUM	Rethorics
kfd	Forslund, Kerstin	HEALTH	Nursing Science	mehr	Holmefur, Marie	HEALTH	Occup. Therapy
khn	Hedström, Karin	ECON	Informatics	mel	Engwall, Magnus	NAT	Biology
kht	Lidström-Holmqvist, Kajsa	HEALTH	Occup. Therapy	melg	Lidskog, Marie	MED	Nursing Science
Kie	Kirrander, Peter	RÖL	Surgery	mesg	Öhman, Marie	HEALTH	Sport Science
kifn	Franzén, Karin H	HEALTH	Surgery	mesr	Schindler, Maike	NAT	Mathematics, Physics
kijn	Jackson, Karin	HEALTH	Nursing Science	met	Eriksson-Crommert, Martin	HEALTH	Medicine
kisl	Skovdahl, Kirsti	HEALTH	Nursing Science	mgd	Grenegård, Magnus	MED	Biomedicine
Kja	Kjellin, Lars	RÖL	Nursing Science	mgn	Gustafsson, Margareta	HEALTH	Nursing Science

mha	Hatakka, Mathias	ECON	Informatics	Nov	Norrman, Eva	RÖL	Medicine
mhgi	Goswami, Manish	NAT	Biology	Nox	Nordenskjöld, Axel	RÖL	Medicine
mht	Hedfeldt, Mona	ED&SOC	Human Geography	nsk	Scherbak, Nikolai	NAT	Biology
midn	Danielsson-Tham, Marie-louise	HUM	Culinary Arts	nwm	Wahlström, Ninni	ED&SOC	Education
mihn	Hälleberg-Nyman, Maria	HEALTH	Nursing Science	nvs	Venzelos, Nikolaos	HEALTH	Biomedicine
mijn	Johannesson, Marie	HEALTH	n.a.	Nyi	Nyhlin, Nils	RÖL	Medicine
miln	Larsson, Maria	NAT	Chemistry	oan	Andrén, Ove	HEALTH	Medicine
miso	Stetsko, Maria	LPS	Social Work	odlg	Lindberg, Odd	LPS	Social Work
mjl	Jarl, Magnus	ENGIN	Engineering	Ohm	Ohlsson Nevo, Emma	RÖL	Nursing Science
mld	Lind, Martin	ED&SOC	Sociology	Ohn	Ohlin, Andreas	RÖL	Medicine
mlk	Lundmark, Mats	ED&SOC	Human Geography	Olo	Olsson, Lovisa	RÖL	Biomedicin
mlki	Krzyzanowski, Michal	HUM	Media and Comm. Studies	olt	Ljungqvist, Olle	MED	Surgery
mls	Lyles, Max	LPS	Legal Science	Osn	Ostlund, Ingrid	RÖL	Surgery
mlsn	Svensson, Mikael	ECON	Econ. and Stat.	Oto	Ottosson, Johan	RÖL	Surgery
mmr	Möller, Margareta	HEALTH	Nursing Science	own	Westin, Olle	ECON	Business Adm.
mnad	Ahmed, Mobyen	ENGIN	Informatics	ovy	Varköy, Övind	HUM	Musicology
mngd	Gifford, Mervyn	HEALTH	Nursing Science	pbz	Berglez, Peter	HUM	Media and Comm. Studies
mngn	Gulliksson, Märten	NAT	Mathematics, Physics	pcr	Czigler, Peter	HEALTH	Disability Science
mnk	Norrefalk, Mats	HUM	Musicology	Pea	Persliden, Jan	RÖL	Medicine
mnkn	Karlsson, Mari-Ann	ECON	Business Adm.	Pee	Persson, Lennart	RÖL	Medicine
mnko	Karlsson, Martin	ED&SOC	Political Science	pejn	Johansson, Peter	NAT	Physics
mnmn	Magnusson, Martin	ENGIN	Computer Science	peIn	Ledin, Per	HUM	Language Studies
mnse	Schrooten, Martien	LPS	Psychology	penn	Nilsson, Per	NAT	Mathematics, Physics
mnst	Van Zalk, Maarten	LPS	Psychology	pet	Engfeldt, Peter	HEALTH	Medicine
Moa	Molling, Paula	RÖL	Biomedicin	pfg	Fredäng, Päivi	ED&SOC	Education
modo	Di-Rocco, Maurizio	ENGIN	Computer Science	pgan	Andersson, Pär-Yngve	HUM	Language Studies
mor	Özdemir, Metin	LPS	Psychology	phk	Heydebreck, Peter	ECON	Business Adm.
mos	Öberg-Tuleus, Marianne	ED&SOC	Education	pkon	Olsson, Per-Erik	NAT	Biology
mpt	Prekert, Malin	HEALTH	Biomedicine	pksn	Sandin, Patrik	NAT	Mathematics, Physics
mqt	Quennerstedt, Mikael	HEALTH	Sport Science	pyk	Karpaty, Patrik	ECON	Econ. and Stat.
mrpm	Åström, Maria	HEALTH	Medicine	pll	Lindell, Pia	ECON	Business Adm.
mrjn	Jaensson, Maria	HEALTH	Nursing Science	pnIn	Larsson, Per-Göran	MED	Medicine
msbm	Bäckström, Mattias	NAT	Chemistry	pnr	Nylander, Per-Åke	LPS	Social Work
msen	Eriksson, Mats	HUM	Media and Comm. Studies	Por	Poci, Dritan	RÖL	Medicine
msg	Steinberg, Maria	LPS	Legal Science	prfg	Forsberg, Per	ECON	Business Adm.
mshn	Hansson, Magnus	ECON	Business Adm.	prhn	Hansson, Pär	ECON	Econ. and Stat.
msja	Johansson, Magnus	MED	Biomedicine	prr	Ranjbar, Parivash	HEALTH	Disability Science
msjo	Johansson, Mattias	HEALTH	Sport Science	prs	Riis, Peder	HUM	Musicology
mskn	Karlsson, Mats	HEALTH	Biomedicine	ptan	Andersson, Per-Gösta	ECON	Statistics
msl	Sundhäll, Marcus	NAT	Mathematics, Physics	Raa	Ranjbar, Parivash	RÖL	Disability Science
msle	Liljegen, Mats	LPS	Psychology	Rae	Rask, Peter	RÖL	Medicine
mslg	Lindberg, Magnus	MED	Medicine	Rav	Rask, Eva	RÖL	Medicine
mslk	Lodefalk, Magnus	ECON	Econ. and Stat.	rbu	Baianstovu, Rúna	LPS	Social Work
mss	Selim, Marianne	HEALTH	Surgery	rean	Allvin, Renée	HEALTH	Surgery
mswl	Wattwil, Magnus	HEALTH	Surgery	riva	Vumma, Ravi	HEALTH	n.a.
mten	Eriksson, Mats	HEALTH	Nursing Science	rke	Kruse, Robert	MED	Biomedicine
mtjn	Johansson, Märta	LPS	Legal Science	rki	Kormi-Nouri, Reza	LPS	Psychology
mts	Tillfors, Maria	LPS	Psychology	krk	Kumar, Ranjeet	NAT	Biology
mubm	Boström, Magnus	ED&SOC	Sociology	rlg	Lidskog, Rolf	ED&SOC	Sociology
mufn	Frostenson, Magnus	ECON	Business Adm.	rnbr	Jan Brummer, Robert	MED	Medicine
muon	Ögren, Magnus	NAT	Mathematics, Physics	rnn	Norlin, Rolf	MED	Surgery
mwd	Wiklund, Matilda	ED&SOC	Education	rsq	Stenberg, Reidun	HEALTH	Medicine
mvt	Wright, Moira	ED&SOC	Education	rtm	Tellström, Richard	HUM	Culinary Arts
myz	Yilmaz, Maria	HEALTH	Occup. Therapy	Rut	Rudblad, Stig	RÖL	Surgery
mzIn	Larsson, Matz	HEALTH	Medicine	rvo	Valencia-Carrero, Rafael	ENGIN	Computer Science
Nan	Naslund, Ingemar	RÖL	Surgery	rze	Zarenoe, Ramesh	HEALTH	Disability Science
nask	Hasche, Nina	ECON	Business Adm.	saa	Aila-Gustafsson, Sanna	HEALTH	Medicine
nbk	Van Zalk, Nejra	LPS	Psychology	Saa	Sandin, Mattias	RÖL	Surgery
nbr	Buer, Nina	HEALTH	Biology	sabm	Bergbom, Sofia	LPS	Psychology
ndi	Dragoni, Nicola	ENGIN	Computer Science	Sae	Savenstrand, Helena	RÖL	Biomedicin
nen	Eriksen, Niklas	NAT	Mathematics, Physics	sasc	Salihovic, Samira	NAT	Chemistry
nhs	Hagnelius, Nils-Olof	HEALTH	Medicine	sasd	Strid, Sofia	ED&SOC	Gender Studies
Nil	Nilsagard, Ylva	RÖL	Medicine	sba	Bagga-Gupta, Sangeeta	ED&SOC	Education
nkN	Karlsson, Niklas	ECON	Statistics	sbd	Berglund, Sten	ED&SOC	Political Science
nkr	Krüger, Niclas	ECON	Econ. and Stat.	Scg	Schroder, Agneta	RÖL	Nursing Science
nmr	Maivorsdotter, Ninitha	HEALTH	Sport Science	Scr	Schwarz, Erik	RÖL	Medicine
nnn	Nyhlin, Nils	HEALTH	Medicine	sewn	Widen, Stephen	HEALTH	Disability Science
Non	Norell Clarke, Annika	RÖL	Nursing Science	sfan	Andersson, Swen-Olof	HEALTH	Surgery
Noo	Noren, Torbjörn	RÖL	Medicine	sfnb	Bjarnason, Sif	HEALTH	Disability Science

sfn	Hedin, Staffan	HUM	Musicology	The	Thunberg, Per	RÖL	Medicine
sfr	Keiter, Steffen	NAT	Biology	Til	Tina, Elisabeth	RÖL	Biomedicin
sfn	Frödén, Sara	ED&SOC	Education	tla	Laitila, Thomas	ECON	Statistics
sgn	Green, Sofia	HEALTH	Public Health Sciences	Toi	Toros Vig, Bianca	RÖL	Biomedicin
shm	Hjältn, Sören	HEALTH	Sport Science	tran	Andersson, Torbjörn	MED	Surgery
shn	Helin, Sven	ECON	Business Adm.	trjn	Skoog, Therése	LPS	Psychology
sibr	Bayram-Ozdemir, Sevgi	LPS	Psychology	tsnn	Nygren, Tobias	HUM	Culinary Arts
Sil	Silva de Leon, Alex	RÖL	Surgery	tssg	Strandberg, Thomas	LPS	Disability Science
Sjn	Sjogren, Anders	RÖL	Medicine	tsv	Stoyanov, Todor	ENGIN	Computer Science
Ske	Skoog, Per	RÖL	Surgery	twg	Wang, Thanh	NAT	Chemistry
SkI	Skeppner, Elisabeth	RÖL	Nursing Science	Tyu	Tysk, Curt	RÖL	Medicine
skn	Karlsson, Sune	ECON	Statistics	uann	Nilsson, Ulrica	HEALTH	Nursing Science
skr	Köbler, Susanne	HEALTH	Disability Science	uaon	Ohlsson, Ulla	HEALTH	Nursing Science
Sku	Skarberg, Kurt	RÖL	Nursing Science	ufhn	Hanson, Ulf	HEALTH	Medicine
sli	Li, Sumei	NAT	Chemistry	uftt	Tidefelt, Ulf	MED	Medicine
slim	Islam, Sirajul	ECON	Informatics	ukan	Fernberg, Ulrika	HEALTH	Biomedicine
sln	Geidne, Susanna	HEALTH	Public Health Sciences	Una	Unemo, Magnus	RÖL	Biomedicin
sman	Abdurahman, Samir	NAT	Biology	Une	Unell, Lennart	RÖL	Medicine
smde	deBoise, Sam	HUM	Musicology	utg	Tornberg, Ulrika	ED&SOC	Education
smy	Montgomery, Scott	HEALTH	Medicine	uvn	Volgsten, Ulrik	HUM	Musicology
snjn	Janson, Staffan	LPS	Pediatrics; social	vai	van Nieuwenhoven, Michiel	RÖL	Medicine
snkn	Karlsson, Stefan	NAT	Chemistry	Wai	Waldenborg, Micael	RÖL	Biomedicin
snln	Hilmerby, Sören	ENGIN	Engineering	Wan	Watterbjork, Inger	RÖL	Nursing Science
snsd	Särnblad, Stefan	MED	Medicine	Wao	Wallin, Göran	RÖL	Surgery
snwn	Wingren, Sten	MED	Medicine	Wea	Westberg, Håkan	RÖL	Biomedicin
Soo	Souza, Domingos	RÖL	Surgery	vgs	Galis, Vasilis	HEALTH	Disability Science
sos	Odenrants, Sigrid	HEALTH	Nursing Science	vhg	Hahn-Strömberg, Victoria	HEALTH	Biomedicine
sps	Paldanius, Sam	ED&SOC	Education	Via	Vidlund, Märten	RÖL	Surgery
srm	Rimm, Stefan	HUM	Rethorics	Vie	Villman, Kenneth	RÖL	Medicine
ssc	Salihovic, Selma	LPS	Psychology	wtm	Tham, Wilhelm	HUM	Culinary Arts
Sta	Stahlacke, Katri	RÖL	Medicine	ykm	Kim, YunHwan	LPS	Psychology
Ste	Stenberg, Reidun	RÖL	Medicine	yln	Larsson, Ylva	LPS	Legal Science
Str	Steninger, Erik	RÖL	Medicine	ylu	Liu, Yang	NAT	Mathematics, Physics
sukn	Kanagarajan, Selvaraju	NAT	Chemistry	ynd	Nilsagård, Ylva	HEALTH	Medicine
swd	Wistrand, Sten	HUM	Language Studies	ynli	Li, Yinan	ECON	Econ. and Stat.
Svi	Svantesson, Mia	RÖL	Nursing Science	yua	Uggla, Ylva	ED&SOC	Sociology
svln	Linton, Steven	LPS	Psychology	ywm	Wengström, Yvonne	HEALTH	Nursing Science
swm	Wennström, Stefan	HUM	Culinary Arts	yzg	Zhang, Ye	NAT	Mathematics, Physics
Svo	Svensson, Börje	RÖL	Surgery	Zan	Zackrisson, Ann-Britt	RÖL	Nursing Science
tajn	Johansson, Tobias	ECON	Business Adm.	Zea	Zetterstrom, Karin	RÖL	Surgery
tbn	Bengtsson, Torbjörn	MED	Medicine	n.a.	Jurstrand, Margaretha	HEALTH	Biomedicine
ted	Englund, Tomas	ED&SOC	Education	n.a.	Nilsson, Torbjörn	HEALTH	Medicine
Tha	Thulin Hedberg, Sara	RÖL	Biomedicin	n.a.	Falkner, Kajsa	ED&SOC	Education

Note: RÖL researchers have a first Capital Letter in their ORU-ID.
This ID was created specifically for the bibliometric analysis and has no relevance for the actual ORU-ID use at any ORU Campus organisation.

Annex G: Significance in Education and Teaching

Rapporteur: Kenneth Nordgren

I have been asked to give some brief notes on the subunits' significance in education and teaching. This assignment is understood as a comment upon those eleven subunits that have brought up didactic research in their self-evaluations. Most of these subunits have either a subject-based connection to the Teacher Education Programme or a specialisation in educational research.

Significance is here understood as the presence of environmental resources for research (e.g. academic competence, economic funding, strategical planning, seminars etc.). For most subunits there is very little data that distinguishes didactics from other areas. There is no bibliometric data to support an evaluation of actual research, or to evaluate specific resources in funding and academic competences. The grading has to be understood more as impressions than an evaluation. The grading does not relate to any international/national comparison, but rather to research efforts at Örebro University.

Although there is insufficient data to make a qualified grading it is worth stressing the importance of the request in an evaluation like ORU2015 to assess didactic research. Hopefully this indicates an interest to further develop this field of research.

Subunits	Remarks	Significance in education and teaching
Biology	Referring to science didactics.	-
Didactics in Mathematics & Natural Sciences	Small environment; external funding; Professor of Mathematics Education.	Mathematics: Moderate (-) Natural science: Low
History	No research environment yet; lacks clear strategy; Senior lecturer.	Low (+)
Language Studies	No research environment yet; there is interest but no clear strategy.	Low
Musicology	Small research environment; there is a clear focus on educational research issues.	Moderate
Rhetoric Didactic Research	One interested lecturer.	Low
Communication, Culture and Diversity	Too small a subunit to evaluate; there is a clear focus on educational research issues.	(?)
Education	A relatively large environment; productive key researchers; achievements in environmental, sustainability and outdoor didactics.	High (-)
Political Science	Civic and youth studies with relevance for education; no research environment.	Low
Youth & Society	Civic and youth studies with relevance for education; no research environment.	Low
Sport Science	There is a clear focus on training issues in research and a small but organised environment.	Moderate

There is no obvious definition or shared understanding of didactic research in this context. Didactics can for instance imply a general pedagogical perspective on teaching and learning for Education and a more subject specific perspective for Mathematics. The self-evaluations indicate at least four different horizons of understanding didactics at Örebro University:

- i. There is a subject-didactical understanding, where disciplinary concepts and perspectives are seen as an integrated part of understanding teaching and learning. (E.g. Mathematics.)
- ii. There is a general didactic understanding, where theoretical perspectives (pedagogical, psychological, sociological, intersectional, etc.) are used to examine general aspects of teaching and learning as they occur for instance in subject related teaching and learning. (E.g. Education, possibly Sport Science and Musicology.)
- iii. If schools, teachers or students are present in research data this signals education/didactics. (E.g. Political Science, Youth & Society, possibly Musicology.)
- iv. Most scholars have didactical competences since they are teachers. (E.g. Language Studies.)

These understandings are not mutually exclusive, but there are tensions between them. If there is an interest in developing an overall strategy or a supporting infrastructure, it is worth examining the mutual understandings of didactics more closely as a field of research, its aims, perspectives, objects of research, etc.

Subject didactics is a field that is relatively undeveloped on a national level. Some fields are however growing quite fast. Subject didactical research tends to have infrastructure problems as in how to organise the researchers and how to organise the responsibility for strategic decision-making. There is often an obvious connection to a discipline, which is of importance for depth and legitimacy. Meanwhile, it can be difficult to maintain a critical mass of researchers within a single discipline. A more centralized organization is one option to bring researchers together. This can, however, lead to perspectives that are more general or pedagogical rather than subject didactical.

I have three main observations concerning didactic research at Örebro University. Firstly, there seems to be no overall strategic approach in developing the didactic research, neither concerning organisation nor focus and direction. There are, however, some key researchers and quite a few subunits interested in educational issues. There seems also to be a tradition of interdisciplinary cooperation. It is therefore of importance to develop an infrastructure based on local conditions and find common ground for relevant seminars, methodological and theoretical exchange and learning, interdisciplinary projects, etc. Secondly, there seems to be a need for overall decision-making concerning focus: Should there be research especially related to the Teacher Education Programme, or towards areas of research which are especially strong at Örebro University? This is also a question of resources. So far there have been no major efforts to create environments for educational research in the different subjects, except for Education. It would require major investments to achieve a critical mass of researchers. Thirdly, there is no subunit expressing special interest in research about higher education. The prerequisites for higher education are under strong influence of contemporary political, demographic and technological change – nationally and globally. How those challenges are met will be of vital importance for higher education.

Recommendations:

- The environments for subject-didactical research are generally weak. Researchers and PhD students are in danger of being isolated. A strategy for developing a functional infrastructure, including funding, for subject-didactical research seems necessary.
- A strategy to develop more coherent environments could benefit from cooperation between disciplines and with Education. A recommendation is not to underestimate tensions between different interests on research. A well-functioning cooperation could however strengthen the environments and their theoretical and methodological approaches to teaching and learning.
- There seems to be a well-developed tradition of interdisciplinary cooperation within the university. There are probably more interrelations to develop, such as between disciplinary and didactical approaches, and interest from different fields on aspects such as diversity, interculturality, civics, health, IT, design methodology etc.
- Consider how higher education can be a relevant interdisciplinary research area for Örebro University.

Annex H: Presentation of the Panel

Dan Brändström (Chair)

Professor of Political Science and Chair of the Linneus University Board, Sweden

Peter van den Besselaar

Professor of Organisation Sciences at VU University, Netherlands

Catarina Coquand

Associate Professor of Computer Science at Malmö University, Sweden

Gudrun Dahl

Professor Emerita of Social Anthropology at Stockholm University, Sweden

Katarina Eckerberg

Professor of Political Science at Umeå University, Sweden

Anders Ekbohm

Senior Professor of Epidemiology at Karolinska Institutet, Sweden

Alexander von Eye

Professor Emeritus of Psychology at Michigan State University, USA

Ingalill Rahm Hallberg

Professor Emeritus of Health Care Science at the University of Lund, Sweden

Lars Hassel

Professor of Business Administration at Umeå University, Sweden

Hans Johannesson

Professor of Machine Design at Chalmers University of Technology, Sweden

Kenneth Nordgren

Senior lecturer of History at Karlstad University, Sweden

Stefan Nordlund

Professor of Biochemistry at Stockholm University, Sweden

Kimmo Nuotio

Professor of Criminal Law at the University of Helsinki, Finland

Torben V. Schroeder

Professor of Vascular Surgery at the University of Copenhagen, Denmark



