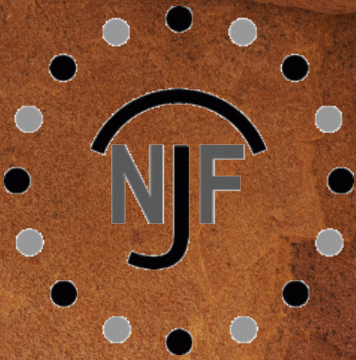


**/SULF/**



**UNCERTAINTY - A REALITY FOR  
JUNIOR RESEARCHERS IN SWEDEN**

/The Swedish Association of University Teachers  
and Researchers & National Junior Faculty

**Uncertainty - a reality for junior researchers in Sweden**  
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Authors from NJF: Lonni Besançon, Katharina Herzog, Sara Hägg and Carine Signoret  
Authors from SULF: Git Claesson Pipping and Karin Åmossa  
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# Uncertainty – a reality for junior researchers in Sweden

## 1.1 Summary

This report shows that junior researchers in Sweden can hold a wide range of positions and titles. We have also looked at the length of respondents' employment contracts. The length of junior researchers' employment contracts increases in line with the acquisition of academic qualifications, from a position as a postdoc on a scholarship and then on a salary to a permanently employed researcher or assistant professor.

The report also shows that the proportion of researchers born in Sweden increases in line with the acquisition of academic qualifications, from a position as a postdoc on a scholarship and then on a salary to permanently employed researcher or assistant professor.

The higher a person's position in the academic hierarchy, the longer the employment contract and the higher the proportion of Swedish-born people in those positions.

The level of insecurity when measured in terms of the length of employment contracts, or not even being employed at all, is greatest among researchers born outside Sweden who are at the start of their careers. Scholarship-funded researchers are not protected by welfare safety nets and are therefore especially vulnerable, both within and outside academia. Scholarship funding as a means of income rather than employment is particularly common among non-Swedish-born researchers.

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*"The responsibility for forms of employment lies with the higher education institutions, and it is they who must create the conditions necessary for Sweden to be a prominent research nation."*

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The responsibility for forms of employment lies with the higher education institutions, and it is they who must create the conditions necessary for Sweden to be a prominent research nation. In order to improve conditions for researchers and increase the attractiveness of research as a profession, higher education institutions must do the following, for example through their collaboration within the Association of Swedish Higher Education Institutions:

- Build a national system for career paths in higher education.
- Create clear career paths with transparent criteria.
- Integrate researchers into the institutions' appointments procedures. Researchers must be teachers.
- Advertise positions openly and appoint people transparently in accordance with current regulations<sup>1</sup>

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<sup>1</sup> Ett spel för galleriet? Om anställningsprocesserna i akademien, SULF 2018 (*Playing to the gallery? On recruitment processes in the academic world.*)

## 1.2 Introduction: An increasingly unclear organisational structure

Today, researchers in higher education face great uncertainty. This is especially true for researchers who are at the beginning of their academic careers. Perhaps the biggest uncertainty concerns career paths. Until the mid-1990s, career paths were clearer – at least in theory – because in those days, after the first few years, researchers followed the path set out for university teaching positions in the Higher Education Ordinance. But the large increase in research funding and the accompanying increased number of researchers means that many are further and further away from teaching. The number of postdocs, for example, has increased by 159 per cent in the past decade, and the number of those referred to in the statistics as "other research and teaching staff with doctorates" has increased by 45 per cent during the same period.<sup>2</sup> In line with this development, more and more researchers now have jobs that are not regulated by the Higher Education Ordinance and their pathway to the traditional career development towards a professorship has become increasingly unclear.

With the deregulation of employment in the autonomy reform of 2011,<sup>3</sup> higher education institutions were given the responsibility to formulate roles and positions and their content, (except in the case of assistant professors, senior lecturers and professors, which are regulated by the Higher Education Ordinance). The positions are formulated by the higher education institutions in their appointments procedures. However, at most higher education institutions, researchers are not included in the appointments procedures. As a result, researchers have become even further removed from university teachers and are not covered by such regulations as the teachers' exemption in the Copyright Protection Act or teachers' working time agreements, and they cannot be promoted to the position of professor. Further, they do not have the right to vote in matters such as the collegial appointment of faculty boards and cannot be appointed to their higher education institution's board, (Higher Education Ordinance Chapter 2, Section 7a). Put simply, researchers are outside the formal careers system.

Nevertheless, researcher is the most common position in or survey, and postdoc the second most common. But these positions differ in a crucial way. Postdoctoral researcher is an international term that normally refers to a fixed-term position early in the career. Researcher, on the other hand, can be used to refer to both temporary employees and permanent employees – and to people at the beginning of their career or later.

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<sup>2</sup> Swedish Higher Education Authority (UKÄ): <https://www.uka.se/statistik--analys/statistikdatabas-hogskolan-i-siffror> (in *Swedish*)

<sup>3</sup> The Swedish Research Council (Vetenskapsrådet): FORSKNINGENS FRAMTID! REFORMER INOM FORSKNING OCH FORSKARUTBILDNING 1990–2014 (*The Future of Research – reforms within research and research education*): [https://www.vr.se/download/18.2412c5311624176023d25aa5/1555422987140/FF!%20Reformer-inom-forskning-forskarutbildning1990-2014\\_VR\\_2015.pdf](https://www.vr.se/download/18.2412c5311624176023d25aa5/1555422987140/FF!%20Reformer-inom-forskning-forskarutbildning1990-2014_VR_2015.pdf)

"The detailed regulation of the teaching organisation at higher education institutions is greatly reduced as a result of amendments to the Higher Education Act and the Higher Education Ordinance. From now on, it is only stated that for education and research there must be professors and senior lecturers employed as teachers. Each higher education institution may decide which other categories of teachers they need to have in the light of their local conditions and profile, as well as the eligibility requirements and assessment criteria that are to apply to these teachers."

Neither position is regulated by the Higher Education Ordinance, so it is the individual higher education institution that decides whether they are to be considered a category of teacher. Postdocs are counted as teachers at five of the nine universities surveyed. It is often during the postdoctoral period that people decide whether to stay in higher education or move on to other sectors. Before that decision is made, it is important that they at least acquire some kind of pedagogical qualification.

Researchers are only covered by the appointments procedures at two of the nine higher education institutions surveyed, (see Table 1). At others, a position as a researcher can make it more difficult for someone to become a professor. At the same time, there is a strong incentive for researchers to qualify for a professorship because the title is valuable, for example when applying for research funding. But when the term researcher does not exist in the appointments procedure, researchers are not permitted to assess students, to give one example. The Higher Education Ordinance (Chapter 4, Section 3) states clearly that anyone who is to be employed as a professor must display pedagogical skills. The same ordinance states equally clearly that an examiner is a teacher (Chapter 6, Section 18). Being employed as a researcher thus makes it impossible to qualify for a professorship.

In summary, employment as a researcher is a career dead end at those higher education institutions where researchers are not included in the appointments procedure.

Table 1. Higher education institutions where researchers/postdocs are included in the appointments procedure.

	Postdoc	Researcher
LU	Yes	No
UmU	Yes	Yes
UU	No	No
SLU	Yes	Yes
SU	No	No
KI	No	No
ORU <sup>4</sup>	No	No
LiU	Yes	No
GU	Yes	No

Today, there are not only many different positions and job titles, but there is also great variation in what is meant by the same title, both within and between higher education institutions. Some titles only exist at a single institution.

When career paths within higher education are discussed, it is usually emphasised that they must be clear, predictable and transparent so that those embarking on a career in academia know how to navigate in order to progress. That also helps to make a career in higher education attractive to those who have many other opportunities. But many junior researchers perceive their career opportunities as anything but clear, predictable and transparent.<sup>5</sup> This is partly due to the number of positions that are not regulated or

<sup>4</sup> Both postdocs and researchers are included in the appointments procedures, though not as teachers but as other academic staff.

<sup>5</sup> Signoret C, Ng E, Da Silva S, et al. Well-Being of Early-Career Researchers: Insights from a Swedish Survey. Higher Education Policy. 2018.

part of a clear structure. The purpose of this report is to provide an overview that shows what positions (and contract lengths) junior researchers usually have and how these relate to the researchers' backgrounds and then to discuss the problems that arise within the career structure.

In this survey, a junior researcher is defined as a researcher with a doctorate who does not yet have stable employment on the academic career ladder and may be employed as, for example, a postdoc, (PhD qualified) lecturer, researcher, assistant professor or hold another type of position with primarily research tasks. Some junior researchers are not employed at all and finance their work with the aid of scholarships.

The National Junior Faculty, NJF, is an umbrella organisation for junior researchers at Sweden's largest universities. The Swedish Association of University Teachers and Researchers, SULF, is the trade union and professional association for university teachers, researchers and doctoral students. NJF collected the data in the survey and the analysis was conducted by SULF together with NJF.

### **1.3 Method**

Every two years, NJF conducts a survey of conditions for young researchers through a questionnaire that is distributed to the universities. The descriptive data presented in this report are based on response data from the 2019 questionnaire. The questions that form the basis for the report can be found in Appendix 1. The survey was conducted at the higher education institutions where NJF has members: Umeå University (UmU), Uppsala University (UU), The Swedish University of Agricultural Sciences (SLU), Stockholm University (SU), Karolinska institutet (KI), Örebro University (ORU), Linköping University (LiU), Lund University (LU), and the Sahlgrenska Academy at Gothenburg University (GU).

However, this does not mean that all junior researchers at these universities received the survey questionnaire. Each university with a local association of junior researchers has its own steering group that is composed in different ways. The number of members in the various local organisations also varies greatly, as does the approach to distributing survey questionnaires. Most junior associations have a high proportion of researchers from medical faculties, (KI, GU, UU, LU, UmU), while other universities have higher numbers of researchers with a more scientific or technical focus, (LiU, SLU, SU, ORU). In 2019, according to figures from The Swedish Higher Education Authority (UKÄ), there were 7,642 of what this report describes as junior researchers in these fields at the universities in question, (people with doctorates and career-development positions, PhD qualified lecturers or other research staff). The NJF survey reached an estimated 5,380 junior researchers in total, which is 70 per cent of active junior researchers.

The response rates from each university were estimated at 77 per cent for LU, 61 per cent for SU, 45 per cent for UmU, 31 per cent for SLU, 27 per cent for GU, 18 per cent for KI, 18 per cent for LiU and 16 per cent for UU, which gives a total response rate of 26 per cent. The large variation in response rates depends to a large extent on which method each university's local association uses to reach junior researchers. Some universities only send it to their own members, (LU, SU), while others use the university's own mailing list of junior researchers, (KI, UU), which then reaches a larger group of people of which most have not actively chosen to participate in these activities. However, the response rate is not crucial to the credibility or relevance of the survey. Due to the relatively low response rate, the range of titles that exist in reality is probably even greater than the survey shows.



All the data has been anonymised and analysed at individual level, but the results are presented only at group level. Descriptive data, as well as figures and tables, were created using the statistics program R, version 3.2.

## 2 Results

In total, the survey was answered by 1,376 junior researchers, with the highest number of responses coming from UU, (371), followed by KI, (265) and LU, (254), as shown in Figure 1.

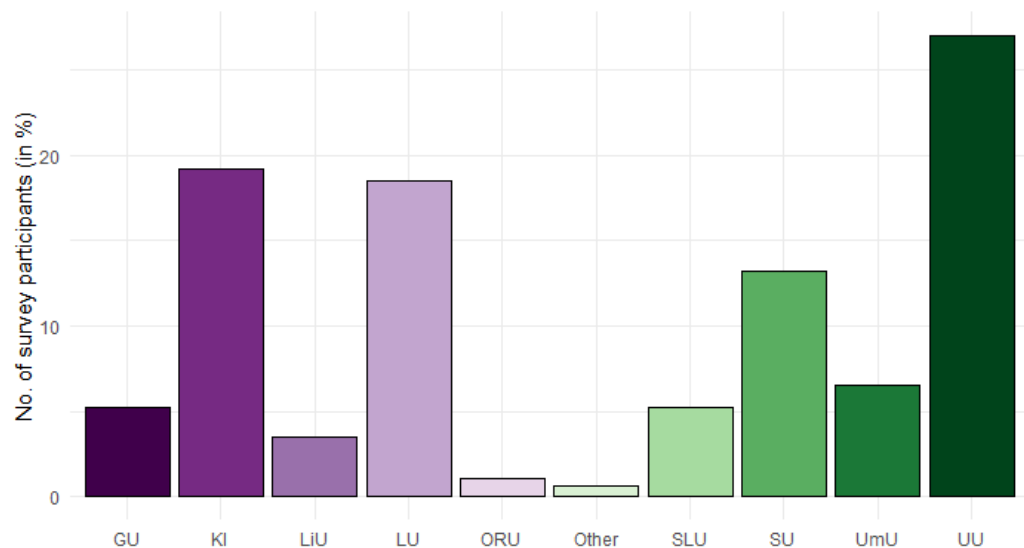


Figure 1. Percentage per university of the total number of junior researchers who completed the survey.

Figure 2 shows that the most common positions in the survey were postdoc, (with or without scholarship), 37 per cent, researcher 32 per cent and assistant professor 17 per cent. Together, these positions accounted for 86 per cent of completed surveys, and these were therefore studied in more detail. Many other positions were also mentioned. A total of more than 20 different positions were reported by the junior researchers who participated in the survey, and these were often university-specific, such as assistant researcher (LU), lab manager (KI), första forskningsingenjör (LiU) and research assistant (UU).

The fact that certain positions are only used by certain universities is a direct consequence of the autonomy reform. Such a system leads to unequal conditions when junior researchers apply for research funding and academic services in nationwide competition and where certain positions and titles have content that is not widely known. It is then difficult to understand where an individual researcher is in their academic career and how different researchers should be compared with each other. In addition, it is almost impossible for individual researchers to understand whether their position is covered by the teachers' exemption or not.

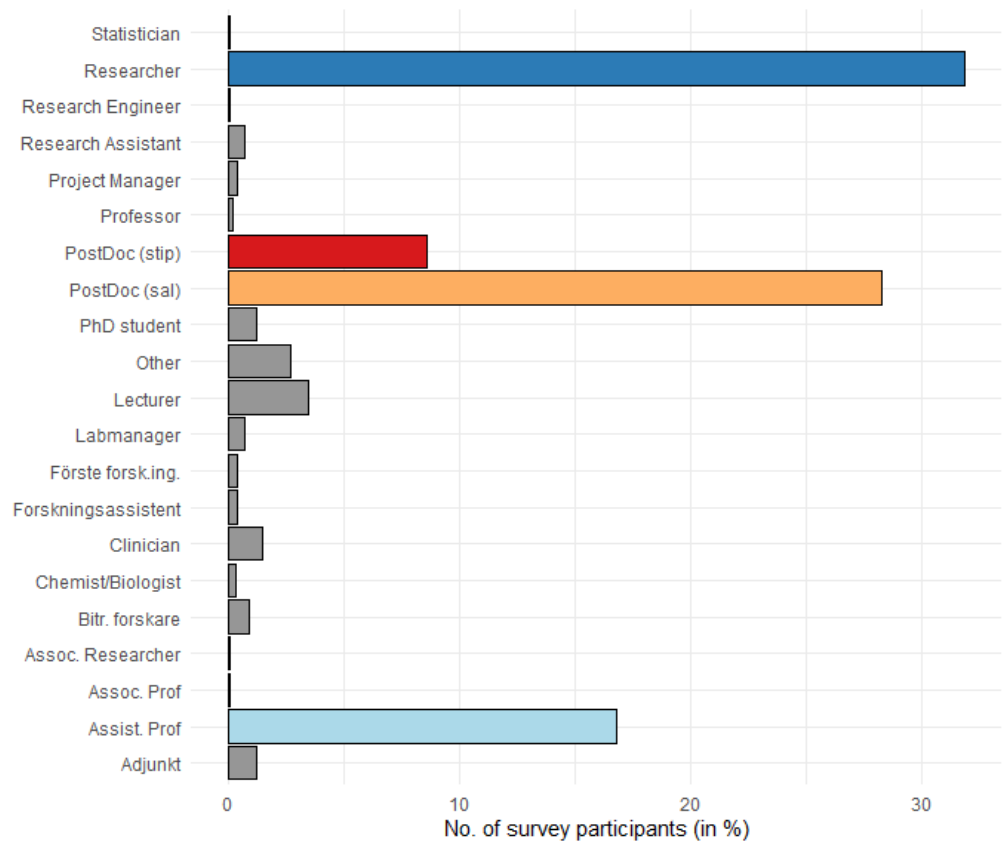


Figure 2. Percentage per position/title of the total number of junior researchers who completed the survey.

For many people, their academic career begins after they have received their doctorate by taking up a postdoctoral position, followed by an assistant professor position and then a position as a researcher. Logic dictates that a position as researcher should actually come before that of assistant professor, but the current system, with the right to promotion from assistant professor to senior lecturer if the criteria for employment are fulfilled, had not yet come into force to any great extent at Swedish universities at the time of the 2019 survey. Our survey also showed that these three positions were the most common and accounted for 86 percent of the total positions reported. There are, of course, exceptions to this academic career ladder in addition to promotion to senior lecturer. One example is that the position of researcher is often used as a senior postdoctoral position at UU.

However, looking more closely at this general structure, it also became clear that the length of a researcher’s employment contract increased in line with increased acquisition of academic qualifications on the career ladder, as shown by Figure 3.

Figure 3 also shows that many people with the position of researcher were permanently employed. The survey also included the response alternative “as long as I provide my own salary”, meaning that their position is dependent on funding. Interestingly, many researchers chose this option as an answer, which indicates that a researcher can be permanently employed but that this does not mean they have a stable job, because it expires when the researcher no longer has funding. This highlights one of the major problems researchers face in higher education – insecure conditions. Not even a researcher with permanent employment has a reasonably secure position because the position is only financed by external funding and expires as soon as the researcher no longer has funding to cover their own salary.

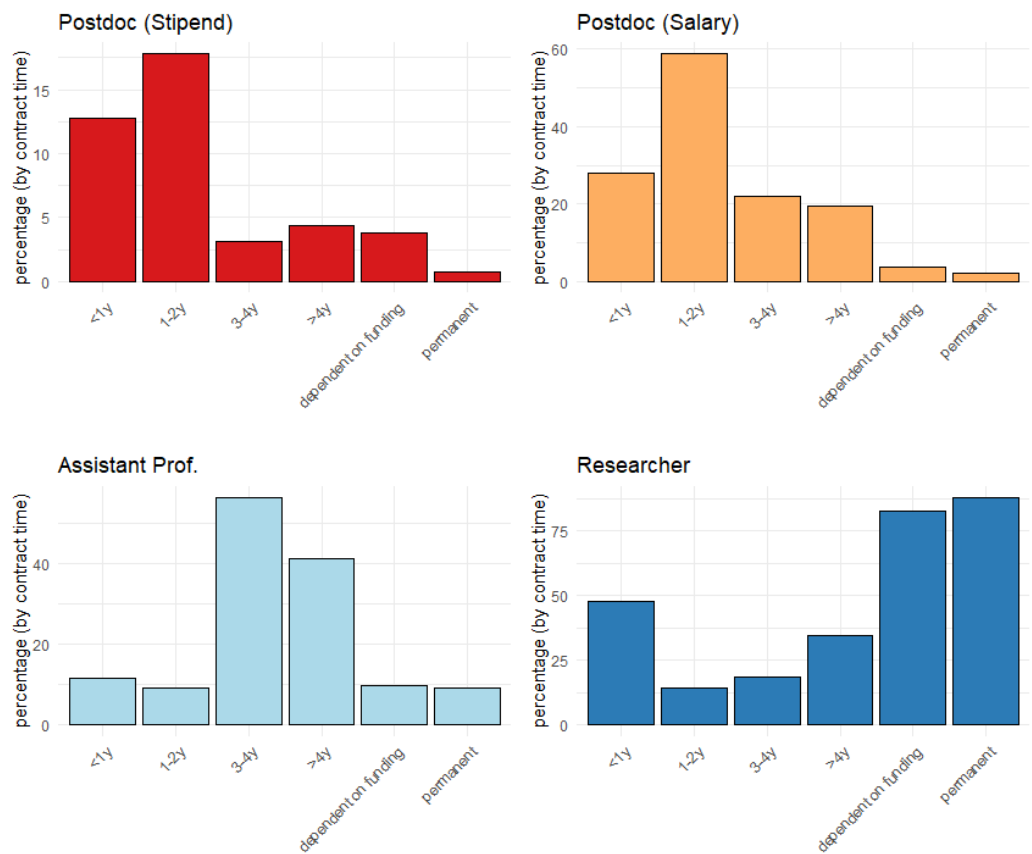


Figure 3. Percentage per length of contract and position of the total number of junior researchers who completed the survey.

It is clear that the proportion of researchers born in Sweden increases in line with greater acquisition of academic qualifications, from a position as postdoc with a scholarship and then a salary to permanent employment as a researcher or assistant professor and later as researcher, as shown by Figure 4. The fact that the proportion of foreign-born junior researchers with postdoctoral positions was largest is perhaps not surprising, as this period following the dissertation is a time when many researchers apply for positions abroad to gain a qualification as an independent researcher.

We can also see that the proportion of foreign-born researchers decreases as people reach the positions of assistant professor and researcher. This may be a consequence of foreign postdocs moving on or back to their home country after completing their projects. If, on the other hand, it means that foreign-born researchers have more difficulty carving out an academic career in Sweden than those born in Sweden, that is a problem that could negatively impact the quality of Swedish research. There are some studies that point to this, although our study does not provide a clear answer.

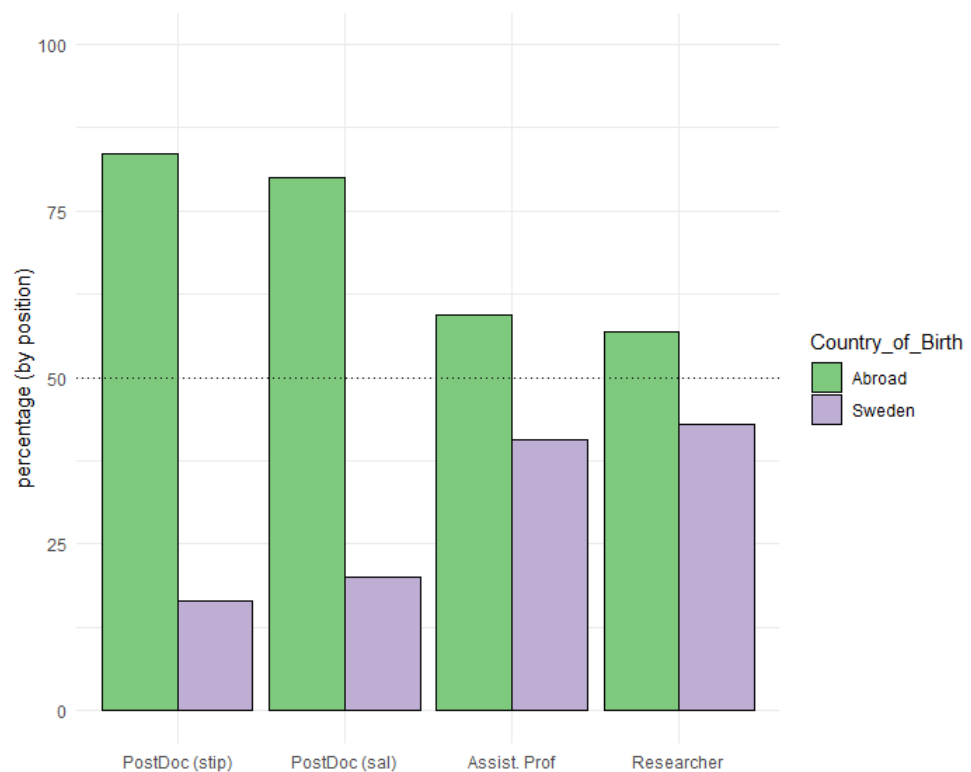


Figure 4. Percentage of junior researchers born in Sweden or elsewhere per position.

However, the ratio of men to women did not differ significantly between the different positions, as is illustrated in Figure 5.

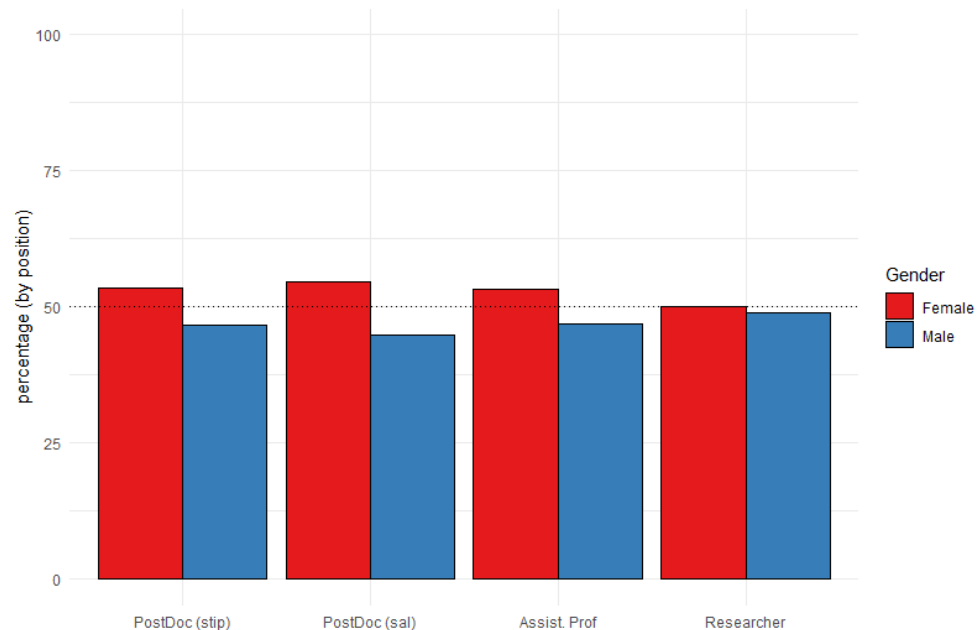


Figure 5. Percentage of female/male junior researchers per position.

### 3 Discussion: It is the responsibility of higher education institutions to provide structured career paths

It is obvious that the organisational structure for career advancement in academia is unclear. For example, what a researcher is and does or what different positions involve varies from one higher education institution to another. When asked directly, it is also not clear to the individual researchers themselves what the different types of employment mean. Being permanently employed is interpreted by some as having employment as long as you have funding, by others as relatively secure employment. The fact that even permanent employment is precarious is a problem for researchers, and it risks making a career in higher education less attractive.

In recent years, the number of doctoral candidates has fallen, especially among people born in Sweden. The Swedish Higher Education Authority wrote in a statistical analysis in the spring of 2019 that "during the last ten-year period, the proportion of the Swedish population who begin doctoral programmes has fallen by half and is now back at the same level as 30 years ago."<sup>6</sup> Even if higher education institutions fill the places with foreign doctoral candidates, too many of these leave the country after graduation for

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<sup>6</sup> <https://www.uka.se/publikationer--beslut/publikationer--beslut/statistiska-analyser/statistiska-analyser/2019-03-14-fokus-forskarutbildning--andelen-av-svenskarna-som-paborjar-en-forskarutbildning-har-halverats.html>

Sweden's and the higher education institutions' need for PhDs to be secured.<sup>7</sup> There is thus an obvious risk that insecure conditions make it unattractive to be a researcher, which may mean that more people choose employment outside higher education.

In addition to the fact that short fixed-term employment or insecure permanent employment is more the rule than the exception, many researchers do not receive a salary for their work but survive instead on scholarships, without the basic security that employment provides. Postdocs who have scholarship funding as their only form of income are particularly vulnerable because most do not have insurance to cover matters like loss of income due to illness or parental leave.

Among those who responded to the survey, scholarships were the most common means of support for foreign-born postdocs. It is clear that Swedish higher education institutions, which in most cases are state agencies, choose not to pay salaries, (or taxes), for people who work on their premises. Furthermore, they sometimes define scholarship-funded postdocs as students, which means for example that they cannot receive child benefit.

It is the higher education institutions that own this issue. All of them regard themselves as keen to be attractive as employers, but at the same time they give the researchers of the future anything but a good start to their careers.

## **4 Solutions: Clear roles and titles within a transparent career structure**

In order to become better employers, every higher education institution needs to take responsibility for establishing clear career paths within its own organisation, with a transparent and manageable number of positions and clear steps. These should preferably be linked to the appointments procedure for teachers in order to make the conditions of researchers equal to those of university teachers. That would be much more appropriate than researchers having the same conditions as technical and administrative staff, which is the case today. Linking conditions to the appointments procedure should also come with the aim of giving opportunities to all researchers to acquire qualifications and experience in teaching in order to have the possibility to become a professor.

In the long term, the Association of Swedish Higher Education Institutions (SUHF) should start work on harmonising the various systems and enabling greater mobility. It is extremely important for science that researchers can move between different institutions and meet in new environments. The present confusing system makes it difficult to see what conditions exist for establishing oneself at a new institution. It is also vital that higher education institutions do not erect obstacles for researchers by claiming some kind of legally dubious "right of ownership" of their data.

Positions must be filled in a transparent manner. As SULF showed in its report "Playing to the Gallery?", (2018), none of the surveyed higher education institutions can show that all positions are filled in the manner prescribed by the regulations. This favouring of existing staff is deeply problematic from a careers point of view, and it is of course ethically unacceptable.

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<sup>7</sup> <https://www.uka.se/download/18.6f6937d1167c5d28e8711eb5/1551796524725/statistisk-analys-2019-02-25-manga-utlandska-doktorander-lamnar-sverige-efter-examen.pdf>

The government should place greater demands on higher education institutions with regard to the establishment of more assistant professor positions. A review of the proportion of research funds distributed as direct government grants and via other state research funders is probably also needed.

The responsibility for employment lies with the higher education institutions, and it is they who must create the conditions necessary to enable Sweden to be a prominent research nation. In order to improve conditions for researchers and increase the attractiveness of research as a profession, higher education institutions must do the following, for example through their collaboration within The Association of Swedish Higher Education Institutions:

- Build a national system for career paths in higher education.
- Create clear career paths with transparent criteria.
- Integrate researchers into the institutions' appointments procedures. Researchers must be teachers.
- Advertise positions openly and appoint people transparently in accordance with current regulations.

## Appendix 1. The survey questions that form the basis of the report

1. What is your gender?
  - a. Female
  - b. Male
  - c. Other
2. Country of birth (please specify)?
3. At which university do you work?
  - a. Linköping University
  - b. Stockholm University
  - c. Karolinska Institute
  - d. Umeå University
  - e. Uppsala University
  - f. Lund University
  - g. Gothenburg University
  - h. Örebro University
  - i. Swedish University of Agricultural Sciences
  - j. Sahlgrenska Academy
  - k. Other (please specify)
4. What is your position?
  - a. Post doc with stipend
  - b. Post doc with salary
  - c. Lecturer (Universitetslektor, Senior Lecturer)
  - d. Assistant professor (Forskarassistent, Biträdande Lektor)
  - e. Adjunkt (Teacher)
  - f. Researcher (Forskare)
  - g. Professor
  - h. Other (please specify)
5. How long is your current contract (i.e. how long it was from the start)?
  - a. < 1 year
  - b. 1–2 years
  - c. 3–4 years
  - d. > 4 years
  - e. As long as I provide my own salary.
  - f. Permanent position





