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**SHORT VERSION: THE SHADOW OF UNCERTAINTY:  
EXTERNAL FUNDING, PRECARIOUS EMPLOYMENT  
AND WORK ENVIRONMENT IN HIGHER EDUCATION**

/The Swedish Association of University Teachers and Researchers

**Short version of the report**

**The shadow of uncertainty: external funding, precarious employment and work environment in higher education  
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Anna-Carin Fagerlind Ståhl

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**/The Swedish Association of University Teachers and Researchers**

/Ferkens gränd 4/ 111 30 Stockholm/08-505 836 00/ kansli@sulf.se

## **Short version:**

# **The shadow of uncertainty: external funding, precarious employment and work environment in higher education**

Almost 60 per cent of research conducted at Swedish universities and colleges is externally funded, i.e. funded by research councils or foundations.<sup>1</sup> Having researchers compete for research funding in competition with each other is regarded as positive for research and its quality<sup>2</sup>, but also for the freedom of research. The Swedish Government's Research Bill (2020) emphasises that the free quest for knowledge, where researchers themselves formulate their research areas and issues, is of fundamental importance to the protection and reinforcement of democracy and that it is ensured through the sharing of free research funding that researchers can apply for from various research funders.

The number of fixed-term employment positions at higher education institutions is significantly higher than at other employers. The fundamental reason for the large proportion of fixed-term employment in higher education is that the Higher Education Act allows greater scope to employ people for a fixed period. This regulatory framework came about because the academic career development system is based on the acquisition of qualifications and continuous evaluation of the university teacher's and researcher's work. Permanent employment at a university or college also carries the risk of providing only illusory security, as permanent employees can be dismissed according to the provisions of the Employment Protection Act (LAS) when or before their research funding runs out. Many permanently employed researchers therefore have "permanent employment dependent on funding"<sup>3</sup>, which will end when the researcher is no longer successful in obtaining external funding. Short fixed-term positions often run consecutively for a long time, but permanent employment can also be terminated and replaced by new permanent contracts several times without providing greater security or predictability.<sup>4</sup>

This report briefly summarises the results of a study of the links between external funding, precarious employment and the psychosocial work environment for researchers and university teachers. All results are described and discussed in more detail in the full report *The Shadow of uncertainty*.

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<sup>1</sup> Higher Education Institutions. Annual Report 2020. Report 2020:9. The Swedish Higher Education Authority (UKÄ), 2020, Stockholm.

<sup>2</sup> Systems for research funding and quality – an international overview. The Association of Swedish Higher Education Institutions (SUHF) SOU, 2016.

Secure and attractive – a research career for the future. Report by the Research Career Commission, SOU 2016:29  
Future choices for the Swedish research system. Knowledge, quality and integrity. The Swedish Research Council (Vetenskapsrådet) 2019c.

<sup>3</sup> Uncertainty - a reality for junior researchers in Sweden. The Swedish Association of University Teachers and Researchers (SULF) & National Junior Faculty (NJF), Stockholm, 2021

<sup>4</sup> Secure and attractive – a research career for the future. Report by the Research Career Commission, SOU 2016:29

Scientific studies have confirmed in detail the primary work-related risk factors for mental health problems.<sup>5</sup> It is partly about the degree of certainty and job security your work enables you to feel, but also about how your work is designed and therefore the demands it places on you and the effort it requires and the extent to which it provides opportunities for you to exercise influence, use your skills and develop, as well as how your conditions enable you to be met with respect and recognition by colleagues and management. In general, research also shows that precarious employment poses a risk of mental illness.



The report will examine the following issues:

1. What are the connections between precarious employment and the psychosocial work environment for researchers and university teachers?
2. What are the links between a) *applying for* and b) *receiving external funding* and the psychosocial work environment for researchers and university teachers?
3. What are the risks and opportunities in the work environment of researchers and university teachers with regard to health, research and teaching?

## Results

The results are based on both survey and interview material. A questionnaire was sent to working members of SULF (n = 18197). Of these, 5556 people (30.5%) responded. In addition, 54 people were interviewed, 46 of whom were members of SULF and 8 were clients of Trygghetsstiftelsen, the Job Security Foundation, who were previously employed in higher education.

### The work environment according to gender<sup>6</sup>, country of birth and position

Demands in this context are the extent to which you fall behind or do not have time to complete work tasks.<sup>7</sup> Influence is about the extent to which you can influence who and what you work with. Sense of community at work is defined in the survey questions as the atmosphere and cooperation between colleagues, and recognition is about the extent to which your work is appreciated by management and whether you are treated fairly at work. The survey results show differences in work environment according to gender, country of birth and position.

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<sup>5</sup> Harvey, S., Modini, M., Joyce, S., Milligan-Saville, J., Tan, L., Mykletun, A., Bryant, R., Christensen, H. & Mitchell, P. (2017). Can work make you mentally ill? A systematic meta-review of work-related risk factors for common mental health problems. *Occupational environmental medicine*, 74, pp 301-310

Occupational exposures and symptoms of depression and burnout. The Swedish Council on Health Technology Assessment (SBU), 2014. SBU report no 223SBU.

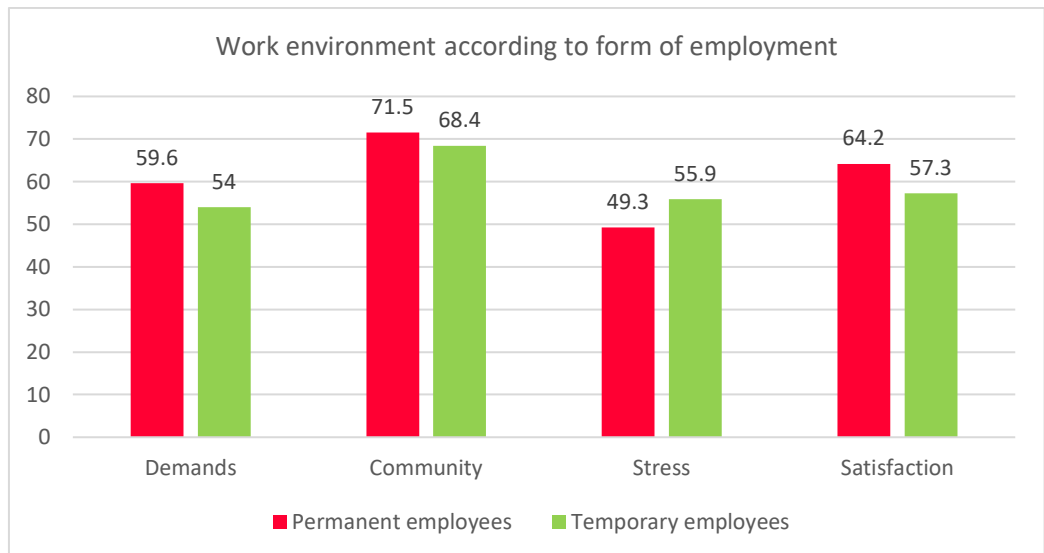
<sup>6</sup> Significant differences between groups were analysed using t-test and ANOVA (analysis of variance).

<sup>7</sup> For questions about psychosocial work environment, stress and job satisfaction, the survey used the Copenhagen Psychosocial Questionnaire: [www.copssoq.se](http://www.copssoq.se)

- Women generally have a poorer work environment compared with men and also experience more stress and lower job satisfaction than men.
- People born outside Sweden report a poorer sense of community and less recognition of their work, but lower demands and less stress than people born in Sweden. People born outside Europe report lower degrees of influence than people born in Sweden and in Europe.
- Associate senior lecturer, doctoral candidate and lecturer are the positions that report the greatest risks, for example with regard to demands, influence and stress. Researchers feel the lowest level of job satisfaction while professors report the highest level of job satisfaction.
- With regard to research subject areas, agricultural and veterinary medicine report the highest demands, but also a high level of influence. The humanities report the lowest demands but also the lowest degree of influence and the highest level of stress. Natural sciences report the highest degree of influence and the lowest level of stress, along with medical and health sciences.

### Work environment according to form of employment and external funding

Temporary employees, (various types of fixed-term employment and scholarship funding), report less influence over their work and a poorer sense of community at work than permanent employees, as well as higher levels of stress and lower rates of job satisfaction. However, permanent employees report higher workloads (Figure 1).



**Figure 1:** Differences in work environment according to type of employment. "Temporary" includes various forms of fixed-term employment and scholarship funding.

The more applications people write per year, the higher demands, higher stress, lower recognition of work and lower job satisfaction they report.

People who do not have any part of their employment financed by external funding report the lowest demands, but also the lowest level of influence over their work. Those with a *high* proportion, (more than 80 per cent), of their employment financed by

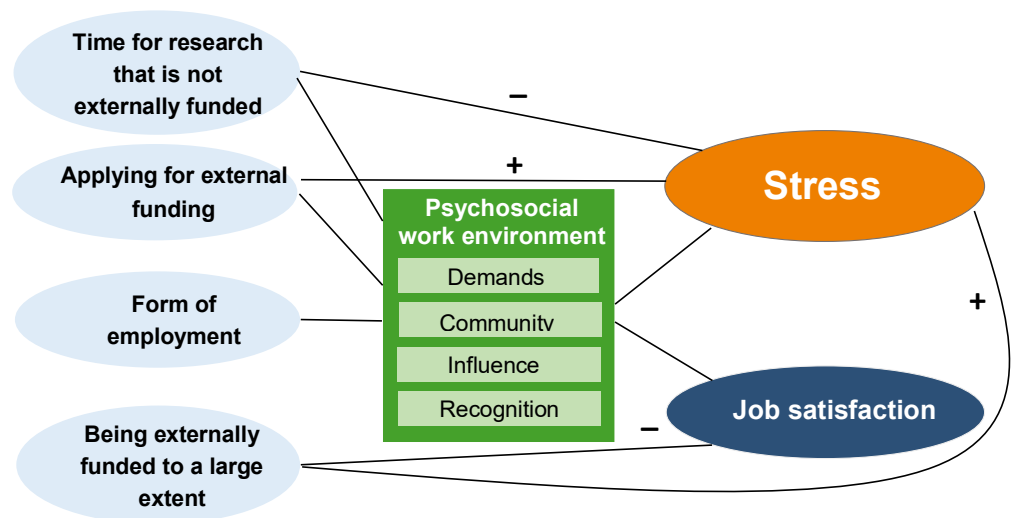
external funding appear to have the poorest feeling of community and lowest job satisfaction at work, while their stress levels are high.

### Time devoted to research within the framework of their position

People who have time devoted to research that is not externally funded within the framework of their employment position consistently experience a better psychosocial work environment, lower stress levels and higher job satisfaction than people without time for research within the framework of their employment.

### Relationships<sup>8</sup> between external funding, form of employment, stress and job satisfaction

In this context, stress is about how often you have difficulty relaxing, are irritable and are tense<sup>9</sup>. Job satisfaction is about how satisfied you are with the way your knowledge and competence are used, your future prospects and your work in general. The relationships are illustrated in Figure 2.



**Figure 2:** The relationships between external funding, form of employment, work environment, stress and job satisfaction.

- When background factors such as gender, age, country of birth and job have been taken into account, there is no connection between the form of employment and stress. The arrow between form of employment and work environment illustrates the differences in work environment reported by fixed-term and permanent employees. These differences in work environment probably explain why temporary employees report higher levels of stress than permanent employees.
- Having time within the framework of one's employment for research that is not externally funded reduces the risk of stress compared with *not* having such time.

<sup>8</sup> Relationships analysed through logistical regression.

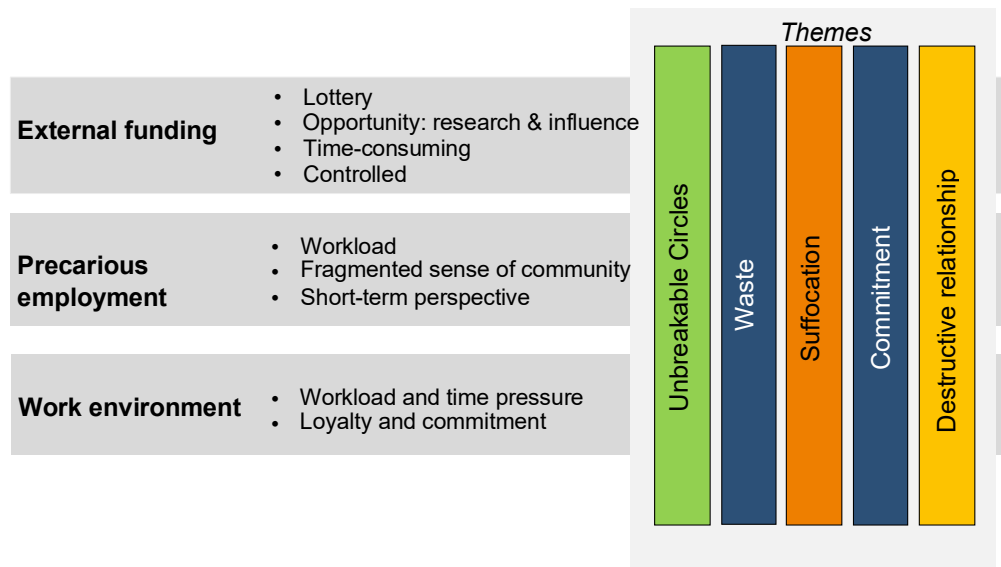
<sup>9</sup> For questions about psychosocial work environment, stress and job satisfaction, the survey used the Copenhagen Psychosocial Questionnaire: [www.copsq.se](http://www.copsq.se)

Not having this time constitutes a risk *in addition to* the risks that such a situation entails in terms of higher demands, a poorer feeling of community and less influence and recognition, as shown above.

- Applying for external funding poses a risk of stress. Compared with not writing any applications at all, the risk of stress increases steadily with the number of applications written per year. This risk remains when the analysis is checked for background variables and risks in the work environment. Applying for external funding thus constitutes a *separate* risk of stress *in addition to* other risks in the work environment.
- People who have a high proportion, (i.e. more than 80 per cent), of their employment funded by external resources run a *higher risk of stress* and have *less chance of job satisfaction* compared to people who have no proportion of their employment funded externally. Nor can this risk be explained by the fact that the working environment differs depending on the proportion of the employment that is funded externally. Being externally funded to a large extent constitutes a *separate* and *additional* potential source of stress.

## Interviews

An empirical description of external funding, precarious employment and work environment is followed by an inductive thematic analysis, (Braun & Clarke, 2006). The results are summarised in Figure 3.



**Figure 3:** The picture above summarises what came up in interviews. It illustrates that five themes emerged in the interview material to deepen the understanding of how external funding, precarious employment and work environment are inter-related and can impact both the individual and the organisation.

## External funding

Regardless of position and whether you have brought in money or not, a picture emerges of external funding appears as “some kind of gambling in written form” (Senior Lecturer 11) or “pure luck” (Postdoc 3). Some degree of quality is necessary to be allowed to participate and play, but the low rate of application success and the doubts about whether it is possible to assess the applications both objectively and with the required knowledge of the specific subject mean that it is seen as a lottery. This can mean that “even if you are interested and want to do research, you are driven by fear” (Researcher 4), that you give up on ideas if you do not think they will attract funding, express yourself differently or just aim for “low-hanging fruit” (Postdoc 5). Focus is devoted to things that it is possible to get money for rather than what is important for the research area: “Buzzwords” (Senior Lecturer 10; Professor 10; Researcher 7), often normative keywords that are “thrown about” (Lecturer 8), or “the right season-related trendy concept” (Lecturer 13). This leads to a risk of “everyone running in the same direction” (Researcher 7) and gives external funders great power to decide “where we are heading in Sweden” (Professor 8).



When you start to change your research just to get funding, it's not a great situation. (Professor 9)

External funding is “an opportunity because it is *the only* opportunity” (Associate Professor 1). In general, external funding is something that is sought “with that sword hanging over you”, which causes more stress than if the external funding were just “the icing on the cake” (Researcher 6). This pressure is often described as “corrosive” (Senior Lecturer 12), a source of stress and something that negatively affects both work capacity and well-being.

“stomach-ache, you might say. A constant feeling that you should be doing more than what you are (...) We are actually quite capable. We have a long education and are quite knowledgeable, and yet many of us feel quite inadequate and not competent, and that's also weird. It doesn't foster a creative environment in any way. You have to feel sometime that you are competent.” (Professor 9)

“Because I was so burdened with teaching, engaged in my teaching, I didn't have reasonable chances to apply for money for my own salary, and that becomes unsustainable. It was the stress that finally broke me”. (Researcher 9, not employed)

## Precarious employment

The insecurity exists in both permanent and fixed-term employment. The insecurity for both permanent and fixed-term employees means that everyone “has their head on the chopping block all the time”. (Professor 6) The fact that your income can disappear suddenly and at any time is seen as a major insecurity factor that affects people's work life, private life and health. It is a burden that overshadows both the good and the bad in the psychosocial work environment, and in many ways it impacts your ability to do a good job.

“Not having a secure job ruins your life. You don't think about your research, but about how you're going to cope”. (Researcher 25)



The uncertainty affects both teaching and research due to temporary solutions and it prevents long-term thinking.

“...I have been responsible for certain courses (...) for seven years, but it was always on condition that it was the last year. Because there was another solution coming. And that means that you can't develop, or that you don't devote time to developing in the way you would like. You do not invest in your work in the same way.” (Researcher 6)

### **Psychosocial work environment**

While social cohesion and colleagues are often mentioned as something positive, heavy workload is often brought up as a problem. Working hours are seldom sufficient for all the things that are to be done and most people work more than 40 hours a week or “all the time” (Senior Lecturer 5; Researcher 3; Professor 4). The explanation for the workload is mainly to be found in the work involved in applying for external funding, insecure employment conditions and the time that is formally set aside for teaching.

*Applying* for external funding is generally felt to be an additional burden and a source of stress. It is a task that is “a total impossibility to manage within the framework of working hours” (Senior Lecturer 13) and is therefore done in leisure time whenever possible.

The insecurity of both permanent and temporary employment increases the workload: people do not dare to say no to assignments, and duties become both numerous and fragmented. It is a “terrible struggle” (Senior Lecturer 7) when you “take on teaching hours on extremely many different courses in extremely many different assignments and have an awful work environment” (Senior Lecturer 7).

With few exceptions, teaching is felt to take more time than is formally allocated to it. In general, teaching is considered to be underfunded and the time available “too meagre” (Senior Lecturer 11) to enable teachers to do a good job and then “you are expected to work wonders with very little money, i.e. very little time” (Professor 4). The administrative burden is also described as time-consuming and stressful and, in many cases, an added difficulty rather than providing tools to make work easier.

*Securing* external funding provides a respite from writing more applications (Senior Lecturer 11) and buys time off from stressful teaching. On the other hand, a successful application means great pressure to deliver something on time, which can be problematic when you already have a heavy workload.

Insecurity and competition for positions and external funding also pose a risk to the social climate. It is difficult to build relationships when it is impossible to know who will be in the department next year. Research requires a long-term perspective to be able to think of new things and not only “play safe”, but also to be able to collaborate with others and build a team. (Professor 4; Professor 6)



You do not really have the feeling that ‘yes, here (...) all of us work and we are all working to achieve the same thing.’ It's more like we are small islands doing stuff. And occasionally you collaborate as a larger island. (Professor 6)

The freedom or influence that external funding provides is often brought up as a positive, and as something that would not be possible if the money were allocated internally. It makes it possible to influence your own work situation and enables you to “manage your time yourself”. (Lecturer 7)

### **Prominent themes in the interviews**

Five themes run through questions regarding external funding as well as those about precarious employment and work environment: separate and unbreakable circles, waste, suffocation, commitment and destructive relationships.

#### **Unbreakable circles that separate research and teaching**

Separate and unbreakable *circles* for research and teaching are difficult to break out of or get into. Getting external funding paves the way for research, publications, networks and positions that increase the likelihood of getting future grant applications approved. Those who do not get into that circle often need to finance their employment through teaching. The teaching circle is easy to slip into but difficult to get out of. Teaching often takes more time than is formally recognised. In order to be able to break the teaching circle, you therefore need to do two jobs: preparing and doing your teaching and other tasks that finance your employment during working hours, and then researching and applying for external funding in your free time. You’ve “dropped out” of research (Professor 8; Lecturer 13) and are stuck in a “problematic hamster wheel” of teaching (Professor 4). Teaching runs the risk of becoming “some sort of plan B” (Professor 7), a “necessary evil” (Senior Lecturer 11) or a “B-function” (Senior Lecturer 10), an “anti-merit” rather than a merit (Professor 3), where you cannot advance in your career after a certain point, whereas research is seen as “higher status”. (Senior Lecturer 11)

#### **Waste**

Waste is identified mainly in terms of the time spent searching and applying for external funding and positions instead of actually doing research, but also in terms of skills when teaching and research take place in separate circles and are not allowed to enrich each other, and in terms of administration. “An incredible amount of time” is spent applying for external funding and employment in a “non-resource efficient” system (Professor 7) that “wastes an extremely large amount of our resources” (Lecturer 12): an “insanity” where you use a research grant to apply for the next one (Professor 4).

“My situation as someone with a temporary contract... it has affected my ability to produce actual things, such as articles, because I need to apply for so many permanent positions. And then when I’m not applying for positions, I’m applying for funding (...) even if I am willing to work in my spare time and everything... you know, I’m only one person with a limited amount of time, so I do what I can.” (Researcher/Senior Lecturer 1)

### **Suffocation of people and ideas in an airless atmosphere**

The third theme is suffocation, which is a reaction to a heavy workload and short-term thinking. This in turn is due to the uncertainty regarding funding and employment. Many people express it as feeling as if there is no air – either to breathe or to think.



It is difficult to get any air in. (...) You throw yourself into your work in the morning and then you almost fall out at the other end, and then you have often not finished what you were supposed to do.  
(Lecturer 10)

This feeling of suffocation is not only stressful but also frustrating: when you are constantly struggling to keep your nose above the water, you cannot inhale enough to dive deep into issues and problems, swim long distances or protest loudly.

### **Commitment that bears the responsibility**

A high level of commitment shines through, and the driving force of the interviewees is made up of curiosity, willingness to explore and learn, the spreading of knowledge and improvement: “this is what you are passionate about doing and want to do” (Associate Professor 1), “it’s not a job, it’s a lifestyle” (Associate Professor 2). That work is seen as an interest and a passion means that few believe that they work “too much”, regardless of how many unpaid hours they work. They want to do a good job, and if the framework and conditions offered by the employer are not sufficient, they make up for it by compromising their leisure time and private life.

“It’s very dependent on people who are passionate and driven by people wanting to do a good job and wanting to work with the students, who are creative and who conduct research and who do it in their spare time”.  
(Senior Lecturer 7)

The commitment of the individuals takes over where the formal framework and conditions reach their limit. As a result, responsibility for the work environment, stress and health is shifted from the employer to the committed individuals. Many people



I try (...) to keep it as a nine-to-five job, which is also part of the reason why I may not really achieve great success but try to hold back and so on.  
(Researcher 1)

justify their heavy workloads with explanations like “it is in some way I myself that causes it (...), primarily because I apply for a lot of external grants.” (Professor 11), and “if it gets to be too much, it’s often because I’m too overambitious” (Senior Lecturer 12) or “I’ve always been something of a workaholic” (Associate Professor 2) who “finds it hard to say no” (Researcher/Senior Lecturer 1). Approaching your work with less enthusiasm is a choice that can put the brakes on your career:

## Destructive relationships

The relationship between the higher education institution and the researcher can be constructive, which means that both parties benefit from, develop and enrich each other. But in many cases, people describe a distribution of power and mechanisms that can be compared to a destructive relationship.

In parallel with the commitment, there is often anger, sadness and despair about how people feel they are treated, about precarious employment that treats staff as “consumables” (Professor 3) “regardless of whether you bring in money or not” (Senior Lecturer 6) and where they are explicitly called a “cost” (Postdoc 1). There is a deep-felt sense that “without ‘the external’, I am not worthy of my research title” (Senior Lecturer 16), that those who do not bring in external funding do not “exist” and that you are more or less *permitted* to work for your employer “if you are nice and bring in enough money and publish enough and so on”. (Senior Lecturer 2)

“You kind of want to feel that you are contributing something valuable, you really want to believe that ‘they don’t want to let you go just because the money has run out’, but we’ve seen that it doesn’t work that way.”  
(Researcher 8)

The relationship is maintained by the commitment, which generates a feeling of gratitude, by the opportunities for reward that are always on the horizon, and by constant rejection and criticism that means that you do not see your worth.

The opportunity to devote yourself to what you like best, and even get paid to be stimulated intellectually, is “a luxury” (Senior Lecturer 11). “You’re working with your hobby” (Professor 9), which increases the risk that you will accept bad conditions or “any amount of uncertainty and insecurity” (Senior Lecturer 2).

The possibilities to obtain external funding and more secure employment are sparse and unpredictable rewards that are sufficient to ensure that people do not stop trying hard.



It’s very complex that you get severely punished for many things and that you also get huge kicks when you actually get something (...). A sick kick-seeking environment. (Postdoc 4)

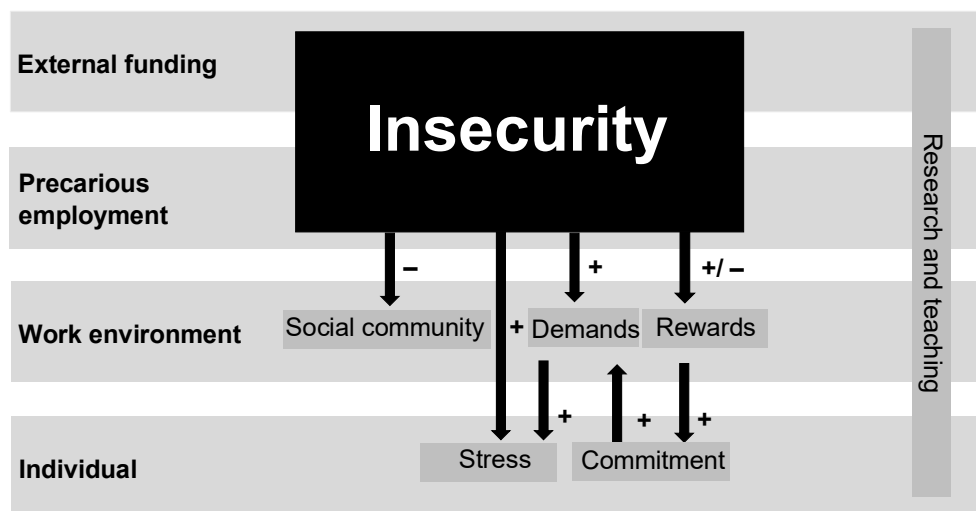
Finally, there is a constant feeling of inadequacy where people have to be good at everything. “You have to be an übermensch” (Associate Professor 2), while constant rejection and competition can make nothing they do seem good enough. “You think you’re not good at anything”, even though you worked “your ass off and were always last” (Interviewee employed outside higher education). “You know that you know a lot but, well, it doesn’t matter in comparison” (Senior Lecturer 16).

## Discussion

The aim of this report was to examine the relationship between external funding, precarious employment and work environment. Interpretation of the results needs to take into account that it was a sample of people that responded, which may in some way be distorted. However, the combination of questionnaires to many people and in-

depth interviews with a smaller number reinforces to some degree the assumption that the results reflect reality relatively well.

The results of the surveys and interviews paint a picture of a work situation that is insecure in many ways. External funding and precarious employment positions contribute to this uncertainty in a number of ways. There are many indications that this insecurity has consequences that are negative not only for the individual researcher and university teacher, but also for the work that is to be carried out and thus for the higher education institutions. The results are summarised in Figure 4.



**Figure 4:** Summary of results.

The allocation of external funding is described as an unpredictable, and for some exciting, lottery. Both fixed-term and permanent positions at higher education institutions should to a large extent be considered precarious, as permanent employment is in many cases dependent on bringing in your own money to finance your research and your salary, including through external grants. This does not mean that different fixed-term positions are as good as permanent jobs, rather that permanent jobs in higher education fail to offer the security they are supposed to.

Insecurity causes a fear that is described as corrosive; difficulty to predict and plan working life, a career and private life; and a feeling that you are not respected, that you are interchangeable. Furthermore, in order to retain funding and employment, it is necessary to take on many different and fragmented tasks, which increases the workload and heightens the risk of stress and related ill health. This creates a sense of suffocation. There is a clear connection between *applying* for external funding and stress. The main opportunities people have to work with this are outside their paid working hours. External funding, precarious employment and the heavy workload that these conditions entail lead to a significant risk of mental illness such as chronic exhaustion<sup>10</sup>.

<sup>10</sup> Harvey, S., Modini, M., Joyce, S., Milligan-Saville, J., Tan, L., Mykletun, A., Bryant, R., Christensen, H. & Mitchell, P. (2017). Can work make you mentally ill? A systematic meta-review of work-related risk factors for common mental health problems. *Occupational environmental medicine*, 74, 301-310  
Occupational exposures and symptoms of depression and burnout. The Swedish Council on Health Technology Assessment (SBU), 2014. SBU report no 223SBU.

Insecurity leads to short-term thinking and competition that risks damaging the social community at work and prevents both the building of trust and the long-term perspective needed to collaborate and dive deep into long-term and more demanding projects. *Securing* external funding can provide a temporary respite where you can buy yourself time to do research and buy yourself free from internal hierarchies and a heavy workload, mainly with regard to teaching. Time available within the framework of employment to conduct research that is *not* externally funded can similarly offer a respite that is not necessarily sufficient to do the research, but does allow you to catch your breath.

As the insecurity is considerable, a lot of time is spent trying to escape it by searching and applying for external funding and more secure employment, which can be regarded as a waste of time that could have been used for research. Additionally, there is a risk that applications for external funding will be guided by the fear that insecurity brings. Many describe how, for fear of not getting funding, they are steered into issues already defined by the financiers and that they abandon complexity in favour of simplicity.

There is great commitment among the researchers and university teachers interviewed. The biggest reward is described in interviews as the opportunity to do a good job, both in research and teaching. This commitment is essential in order to cover for the shortcomings in the work environment created by uncertainty and insecurity: working more hours than are formally allocated and accepting the conditions and the injustice they are perceived to entail. Securing external funding and less precarious employment become rewards in the context of this insecurity. The individual is tied to the organisation through these enticing and highly unpredictable rewards.

Work for increased stability in the organisation, where there are both opportunities and incentives for long-term projects and collaborations that provide personal and professional development.

**!** **Conclusions:** In summary, the report identifies risks in the work environment in relation to both external funding and precarious employment.

- The main way to prevent these risks is to *reduce the insecurity* created by external funding and the existing conditions for different forms of employment.

If this is not possible, the likely negative *consequences of insecurity* should be minimized, for example by:

- Providing more breathing space; examining actual workloads in relation to the actual time available – for everyone, regardless of employment form and financing.

