

## Comments of the FWF on the Evaluation of the START Programme and Wittgenstein Award

*Evaluation of the START Programme and the Wittgenstein Award. Sarah Seus, Eva Heckl, Susanne Bühner; with the participation of Niclas Meyer, Sonia Conchi, Tobias Burst, Christina Schmedes and Barbara Sinnemann. Karlsruhe, 2016. DOI: 10.5281/zenodo.50610*

*Annexes - Evaluation of the START Programme and the Wittgenstein Award. Sarah Seus, Eva Heckl, Sonia Gruber. Karlsruhe, 2016. DOI: 10.5281/zenodo.50610*

The START Programme and Wittgenstein Award were added to the FWF's funding portfolio in 1996. The [START Programme](#) is designed to enable highly promising young researchers from all disciplines to plan their research on a long-term basis and with sufficient financial security. By assuming responsibility for the establishment/expansion and management of a research group, the programme allows principal investigators to gain the qualifications necessary for leading positions in the science and research system. The [Wittgenstein Award](#) aims to ensure that top-notch researchers who have reached outstanding achievements in all disciplines are provided with a maximum of freedom and flexibility in carrying out their research work. The award therefore aims to enable an extraordinary increase in the recipients' research output.

Between 1996 and 2014, a total of 114 START projects with an overall funding volume of EUR 132.6 million were awarded. 16% of the projects were awarded to women. The approval rate in the START Programme is approximately 13% (based on 2002–2014 results), and the amount of grants awarded is up to EUR 1.2 million per project.

Between 1996 and 2014, the Wittgenstein Award was conferred upon 30 researchers (including 4 women), who received EUR 42.4 million in overall funding. During that period, a total of 278 researchers were nominated for the prize. The award carries an endowment of up to EUR 1.5 million.

In anticipation of the 20<sup>th</sup> anniversary of these two programmes, the FWF commissioned a team from the [Fraunhofer ISI](#) (Karlsruhe, Germany) and the [Austrian Institute for SME Research](#) (Vienna, Austria) to conduct an evaluation of the START Programme and the Wittgenstein Award. The evaluation project was led by Susanne Bühner. The goal of the evaluation was to assess the effects of these programmes and to lay the groundwork for a decision on how to run them in the future.

The evaluation was based on a mixed-methods approach consisting of bibliometric analysis with a control group comparison,<sup>1</sup> online surveys of various target groups, expert interviews, case studies, an analysis of programme and monitoring data, and a validation workshop with key stakeholders.

The evaluation team's assessment of the two programmes is highly positive, and the evaluators recommend that the two programmes be continued in their current forms:

- "A continuation of the START Programme in its present form is recommended without any reservations."
- "The Wittgenstein Award seems tailor-made to its target group and has an added value to the scientific system in Austria."

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<sup>1</sup> For the evaluation of the START Programme, a comparison and a control group were assembled. The control group consisted of researchers who resembled the grant recipients as closely as possible in terms of publication track records as well as certain structural characteristics, such as age, gender and discipline; the comparison group comprised those researchers who had been invited to a hearing but had not received a grant.

## START – Careers and excellence

The evaluators comment that the START Programme *"addresses all the relevant elements needed to promote scientific excellence and help develop the careers of young researchers. This is done for START grantees as well as the group members of a START project."* The funding amount and duration are also deemed appropriate.

### *START works*

From the FWF's perspective, one essential feature of the evaluation was the use of comparison and control groups in order to enable a clear assessment of the programme's effects. In this context, the evaluators come to the following conclusion: *"The comparison with the control group shows that START grantees perform better throughout for all indicators and also during the different periods analysed"* and *"The START Programme has contributed to strengthening the grantees' academic performance."*

- The START grantees' expectations of the programme are fulfilled to a high degree.
- The research output of START grantees rises steadily over time, and it grows faster, more extensively and more visibly than that of the control group.
- START grantees have better international connections and publish more in international networks than the researchers in the control group.
- Many START recipients use the experience gained in their projects to establish new cooperation arrangements and to acquire new projects, and a majority of the grantees have also engaged in extensive science communication activities.

### *START as a mechanism for enhancing career prospects and development*

The objectives of the START Programme not only include funding outstanding research, but also enabling young researchers to establish themselves in the Austrian science and research system. Young researchers regard the START Programme as *the* career development mechanism offered by the FWF: *"Consequently [START] is seen as the "top" career development instrument. The high prestige of the grant is furthermore conducive to the career development in the Austrian science system."* In consequence, nearly all of the researchers who have received a START grant in the past have also remained in the field of science and research. A majority of START grantees continue their careers at Austrian institutions, while approximately one-third of them move on to work at research institutions abroad. Last but not least, it is worth noting that 80% of START alumnae/i now hold a professorship. The grantees themselves see the START Programme as an important vehicle for advancing their own careers in science and research, and 80% of the control and comparison groups are of the opinion that START is a suitable means of helping young researchers obtain a permanent position in Austria.

### *START as a way to promote specific focus areas and groups*

START grants are not distributed evenly throughout the Austrian science and research system. The analysis of the regional and disciplinary distribution of approved START applications shows that researchers from certain disciplines and certain regions are more likely than others to take advantage of the opportunity to apply to the START programme. On that basis, the evaluators conclude that the Austrian science and research system is characterised by "hotspots of scientific excellence" which make more use of the START Programme than others. In this context, the evaluators specifically mention physics research at the University of Innsbruck or certain fields within the humanities (e.g. archaeology).

## Wittgenstein – Serendipity and freedom

Wittgenstein is the FWF's "high-end" funding programme. It is the only initiative in the FWF's funding portfolio that follows the "fund people, not projects" principle, and its design includes strong "blue sky research" elements. The Wittgenstein Award is used to fund "*high risk research [...] in which new fields can be explored and disciplinary borders can be crossed*".

The evaluation demonstrates quite impressively that the Wittgenstein Award enriches the FWF's funding portfolio with an instrument that is predestined to promote unconventional, top-notch research. In this regard, the evaluators identify a number of key contributions: Wittgenstein has contributed to (i) the development of new methods, (ii) the exploration of new interdisciplinary research paths, and (iii) the development of new directions in research: "*Not only high-level research has been conducted, but new avenues of research have been explored, scientific performance increased, and the visibility of research in the national and international science community enhanced.*"

The conditions that a research funding agency such as the FWF has to create for this purpose are described by the evaluation team as "trust" and "flexibility". They emphasise trust because the Wittgenstein Award is not based on a specific research proposal, and flexibility because it allows researchers to question the beaten paths in research and to reposition themselves in the science and research system. In this way, researchers can engage in activities "*which would not have been funded in the framework of 'standard' application processes*". One advantage that should not be underestimated in this context is the fact that Wittgenstein Award winners are, for a certain period of time, relieved of the burden of submitting new grant proposals, meaning that award recipients can focus entirely on their research.

### Wittgenstein and early-stage researchers

One possible criticism of the Wittgenstein Award is the fact that it may actually exacerbate the "Matthew Effect"; the award is given to Austria's most renowned researchers, whose projects are most likely to receive funding in any event. The evaluation team responds to this criticism by pointing out that the Wittgenstein Award can (also) be regarded as an instrument for supporting junior researchers. Wittgenstein Award recipients largely use their grants to integrate young researchers into their groups. The award winners in particular see the programme as an effective means of promoting young researchers. "*Most of the award is indeed spent on young researchers who get the possibility of working with outstanding researchers.*" For example, over 100 researchers have completed a PhD in the course of Wittgenstein projects, and several have been able to use their work on those projects as a springboard for their research careers.

## START and Wittgenstein in the innovation system

In the competition for the best and brightest, a functional innovation system should be supported by a well-differentiated funding portfolio. A number of studies (e.g. Janger et al. 2013<sup>2</sup>) have demonstrated the importance of access to suitable third-party funding. The Wittgenstein Award and in particular the START Programme fulfil an important function in this context. For junior researchers faced with a lack of sound career prospects in the Austrian science and research system, the START Programme provides an attractive "starting package": "*The gathered evidence indicates that*

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<sup>2</sup> Janger, J. et al. (2013): "Academic Careers in a Cross-country Perspective", Vienna.

*numerous START grantees would have left Austria without the START Programme in order to take a scientific position abroad."*

The Wittgenstein Award, for its part, is the only programme in Austria that gives researchers an opportunity to realise "blue sky" ideas in their research. Together with their high visibility and the "critical mass" of funding provided by the FWF, these funding programmes constitute unique characteristics that distinguish the Austrian innovation system.

### *ERC & START*

Since the inception of ERC Starting Grants, an EU-level funding mechanism has been available in parallel to the START Programme. This parallel offering raised a number of questions as to the legitimacy and sensibility of the START Programme. The FWF responded to these questions by requiring applicants to submit their applications to both funding programmes: All applicants who apply for a START grant are also required to submit the same project to the ERC. This dual submission requirement has questioned by certain institutional stakeholders at Austrian research institutions. However, the results of the survey among grant recipients and the reference groups reveal a more nuanced picture: Many regard the START Programme as an important supplement to the funding offered by the ERC; in fact, approximately 60% of the researchers surveyed would have submitted applications to the ERC and FWF even if it had not been required.

Both the specific and general results of the survey support the legitimacy of the START Programme: (i) The programme is held in high regard by grant recipients and non-recipients alike; it is not regarded as a "second-rate grant" by either of those groups (*"the START Programme is seen as a valuable and equivalent alternative to ERC by the research community in Austria"*). (ii) START is viewed as a necessary enrichment of the funding portfolio for young post-doctoral researchers; it is considered necessary because funding opportunities at that career stage are already extremely limited due to the low approval rates of the ERC and FWF. (iii) According to the statements made in many interviews, the programme is an important location factor for the Austrian science and research system.

### **Outstanding marks for programme management and execution**

Both the survey results as well as interviews with jury members and grant recipients paint *"an overwhelming[ly] positive picture of the interaction with the FWF"*. The evaluators confirm the grantees' high degree of satisfaction with the execution and management of the programme. In this respect, both the programme and the FWF are distinguished by their flexibility, which is regarded as a crucial basis for the work of outstanding researchers.

### **Recommendations**

The evaluators also issued a number of recommendations and reviewed various options as to how the FWF can develop the START and Wittgenstein programmes further.

### *START & Wittgenstein: No quotas*

START projects and Wittgenstein Awards are not evenly distributed across regions or disciplines (see above). This (also) results from the fact that the candidates' excellence is the only selection criterion in the FWF's funding programmes. In this regard, the evaluators make the following observation: *"The bibliometric analysis and the survey results show that the START Programme select the (most) qualified persons for the programme."* With regard to these programmes, the jury members and

START/Wittgenstein recipients who participated in the survey expressed unequivocal opposition to quotas of any kind (gender, discipline, regions), and neither the survey nor the interviews revealed any indications that would support developing either programme in that direction.

- Excellence should and must be the sole criterion for funding awards.
- At the same time, the FWF will have to engage in an open discussion with the scientific community and its stakeholders on the question of whether it makes sense in terms of research policy to fund the same focal disciplines over years and years.

### *START: Realistic expectations regarding administration and management*

The START grant recipients' expectations of the programme are relatively clear: They expect to enjoy greater freedom and flexibility in their work, to receive the funds required in order to pursue their research objectives, and (subsequently) to improve their career prospects. These expectations are always associated with the establishment and development of their own research groups, which are seen as a great opportunity on the road to independence as a researcher. However, this also involves administrative and leadership duties which are not always planned realistically.

- The FWF can help to remedy this problem by managing expectations in its advising process, to name one example. Specifically, in autumn 2016 the FWF will launch a kick-off workshop with new principal investigators in the START programme in order to raise awareness of the administrative and management effort involved in the projects.

### *No transformation of START into a "pre-START" programme*

The funding situation for post-doctoral researchers in Austria certainly shows room for improvement. A majority of the START principal investigators surveyed see gaps in the available funding. When asked about the post-doctoral career stage at which these gaps are apparent, the researchers surveyed (generally senior post-docs) answered that the shortage of funding mainly affects those post-doctoral researchers who have been in the science and research system for a longer period of time and are waiting to take the next career step into a permanent position at a research institution. For very young post-doctoral researchers at the beginning of their careers, the situation was considered more satisfactory. In the discussion with stakeholders and START principal investigators, it was also observed that young post-doctoral researchers should have better access to funding opportunities that support mobility, such as the Erwin Schrödinger Programme.

- The evaluation does not provide sufficient evidence to justify transforming the START Programme into a "pre-START" programme.

### *No Austrian consolidator grant as a complement to START*

Especially in the course of the validation workshop, the participants discussed the possibility of adding two to three years of "follow-up" funding to the START Programme. As a complement to the existing programme, the additional funding could help to consolidate research and enhance the sustainability of the START groups established. In the course of such a follow-up project, the grantees could also prepare for the next steps in their careers.

- However, in light of the duration of START projects (up to 96 months) and the possibility of submitting stand-alone project proposals in parallel to a START grant, the FWF does not believe that it would be particularly sensible to supplement the programme in such a way.

### *START: Adaptation of selection procedure*

**Maintain standards:** In general, the FWF's selection procedure is given outstanding marks in the evaluation, especially with regard to fairness and transparency. However, the evaluation team does emphasise the importance of maintaining these high standards.

**Improve communication:** In order to increase the applicants' confidence in the selection processes, the evaluation team suggests developing a clear communication strategy to better explain the complex sequence of decisions and to ensure greater transparency.

**Rotation of jury members:** In line with the FWF's practice in the past, the evaluators recommend that the FWF avoid replacing the entire jury at one defined point in time. The jury should include a balanced mix of experienced and new members.

**More time for presentations:** An essential component of the START selection procedure is the candidate hearing and the presentation and discussion process. In this context, a number of participants suggested giving the candidates more time for their presentations.

- The FWF will take up the suggestion of communicating its decision-making processes more clearly by describing each step in greater detail via Twitter and on the FWF's blog. In addition, the decision timetable and sequence will be published on the FWF website. This evaluation will also serve as an aid in presenting the FWF's procedures more transparently.
- Suggestions regarding the hearing process will have to be discussed (i) in the FWF's decision-making bodies and (ii) with the jury.
- The suggestion of using a mix of experienced and new jury members will also be followed in the future.

### *Wittgenstein: Maintain flexibility and freedom in research*

The evaluation clearly states that flexibility and trust are key prerequisites for the success of the Wittgenstein Award. In addition, the evaluators do not recommend including project ideas in the review process.

- In future, the FWF will continue to refrain from imposing (content-related) requirements dictating how Wittgenstein Award recipients are to use FWF funds.
- As in the past, the FWF will not require "project outlines" or similar plans as part of the selection process; the additionality of the programme is specifically rooted in the degree of freedom accorded to the recipients.

### *Wittgenstein: Reform of nomination process?*

The evaluators suggest limiting the group of people eligible to submit nominations for the Wittgenstein Award. Specifically, the evaluation team proposes that nomination privileges should be granted to only one person per research institution.

- The FWF will take this suggestion into serious consideration and discuss it with the Executive Board and the jury.

### *Wittgenstein: Communication and public awareness*

The evaluation team recommends that the FWF should work to generate greater public awareness of the achievements enabled by the Wittgenstein Award and to make better use of the award recipients as "ambassadors of basic research".

- The FWF plans to engage in a structured discussion with Wittgenstein Award winners in order to ensure better cooperation with this group.
- In addition, the FWF will use its science and research blog (*scilog*) even more intensively in order to present the accomplishments of Wittgenstein Award winners more effectively. The FWF will also continue to expand its video series<sup>3</sup> in which Wittgenstein Award winners are presented.
- With the help of this evaluation, the FWF will work to present the programmes' accomplishments more prominently.

### *Wittgenstein: Duration and amount of funding*

At several points in their report, the evaluation team recommends increasing the funding amount and the duration of the Wittgenstein Award.

- Realistically, the FWF can only begin to discuss this option once the current financial situation (see below) changes for the better. In any case, such an increase should be discussed in conjunction with the expansion of the programme as a blue sky funding instrument.

### *Expanding the Wittgenstein Award as a blue sky funding instrument*

The Wittgenstein Award is the only initiative in the Austrian innovation system that offers an opportunity to promote blue sky research and specifically unconventional and radical approaches in science and research. Excellent research and radical innovations form the basis for positioning Austria as an innovation leader. Wittgenstein Awards can serve as a model for initiatives devoted to supporting radical new research ideas. At the same time, the evaluation points out that a steady expansion of the programme would be an important measure to pave the way for more blue sky research.

- The means and instruments with which this type of research can be promoted most effectively will be discussed and explored in a process that will last until the year 2018.

### **Future steps: Budget cuts despite outstanding results**

In light of the outstanding evaluation results, it would be most appropriate to discuss ways to expand the START Programme and the Wittgenstein Award. However, the budget situation has forced the FWF to reduce funding for its portfolio, including the START Programme. In a first step, the number of START projects approved each year will be reduced to five, whereas six to eight projects have been approved each year in the past. No reductions are planned in the Wittgenstein Programme, in which one award is usually conferred each year.

These limitations are attributable to the FWF's budget situation and have to be imposed *despite* the outstanding results of the evaluation. Finally, it can only be hoped that these limitations will not persist for a longer period. Only then can the FWF launch a discussion on the expansion and reorientation of the programmes as mentioned in the recommendations above.

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<sup>3</sup> One example is the video introducing the 2013 Wittgenstein Award recipient Ulrike Diebold: <https://scilog.fwf.ac.at/videos/ulrike-diebold-wittgenstein-preistraegerin-2013>