

SNSF Statement on the Evaluation “Transparency and Overall Quality of Evaluation at the Swiss National Science Foundation”

The Swiss National Science Foundation (SNSF) aims to be an excellent funding body that funds excellent research. An external evaluation by a team of researchers from Western Michigan University shows that this objective is being achieved to a very large extent. The conclusions and recommendations from the evaluation, however, also highlight room for improvement. With this statement, the SNSF presents its appraisal of the findings and conclusions, focussing in particular on potential improvements and the measures with which it intends to follow up on the recommendations.

The evaluation project “Transparency and Overall Quality of Evaluation at SNSF” was initiated by the Foundation Council with a view to assessing and improving the evaluation procedure. It was conducted in 2012 by a team of researchers from Western Michigan University led by Dr Chris Coryn.

The evaluation aimed to show to what extent the evaluation procedure is fair and impartial as well as understandable and transparent and to provide recommendations for improvement. In addition, the project intended to establish to what degree the evaluation procedure of the SNSF.

- promotes excellent and original research in all disciplines;
- increases the competitiveness of Swiss research and of researchers in Switzerland;
- promotes young researchers.

Mission accomplished, but...

After evaluating comprehensive data gained from interviews with key actors of the SNSF, surveys among external reviewers and applicants, document analysis, as well as the analysis of extant data on the funding activities, the US research team has come to the conclusion that the SNSF achieves its objects to a very large degree: “overall, the SNSF’s evaluation policies and procedures promote excellent research, support research that is scientifically relevant and original, increase the competitiveness of Swiss researchers and research, encourage and support the work of young and female researchers, and are impartial and transparent”.

In particular, the evaluation team gives the SNSF a good score on its core objective – **funding excellent research** and contributing to the competitiveness of research in Switzerland, although a minority of applicants and external reviewers believe that the SNSF may be somewhat conservative in its approach to funding innovative research. The evaluation team also identifies a risk in the ever-increasing workload of the National Research Council, which might lead to a point of trade-off between quality and quantity. In this respect, the evaluation confirms the SNSF’s own concerns on the issue of Research Councillors’ workload already highlighted by a previous evaluation of the SNSF in 2001. In view of the strong increase in demand for funding, the changes

implemented following the 2001 evaluation (introduction of Research Council specialised committees, panels of external experts, transfer of competencies to the Administrative Offices) were not sufficient to stabilise the workload. Several recommendations by Chris Coryn et al. aim to lighten the Research Council's workload and underline this issue as a key area of concern, which the SNSF will tackle with a high priority (see recommendations 1-5 below).

The evaluation team also finds that the checks and balances built into the system to ensure the fairness of the evaluation procedure seem to work well. Members of the SNSF take the task of supporting a **fair and unbiased evaluation process** very seriously and analyses of application data as well as surveys of applicants and external reviewers further support the perception that procedures are fair and unbiased. The results of the analyses of application data showing small but significant systematic biases associated with gender, age, type of application and institution type confirm internal monitoring analyses. Analysing funding across the different schemes, the evaluation team comes to the conclusion that young researchers are more likely to receive funding. This demonstrates the impact of career funding schemes. The SNSF has put in place specific checks and balances to ensure that age is not a disadvantage for younger researchers applying for projects open to researchers of different career stages and welcomes relevant recommendations on selection criteria and the funding portfolio (recommendations 4 and 7).

Though impartial and fair, the SNSF's decision-making, and the underlying processes and criteria, need to be made more **transparent and understandable**. The evaluation team acknowledges the substantial efforts made by the SNSF to provide more and better information about the evaluation procedure. New guidelines for researchers were introduced in 2011/2012¹ and the communication of funding decisions was harmonised and extended at around the same time, too recently for an analysis of the impact of these measures. While the SNSF hopes that these measures will help to improve the understanding of the evaluation procedures and the reasons underlying decisions, it takes very seriously the survey findings, according to which a fairly large proportion of applicants do not fully understand the evaluation criteria, the procedures and ultimately the decision making processes. "Almost two thirds of applicants indicated that they are 'very unclear' or 'unclear' as to how 'funding decisions are made'". Not unsurprisingly, the satisfaction with the overall quality of SNSF evaluations is significantly lower for unfunded applicants compared to funded applicants. Further measures are in preparation to improve communication with applicants (recommendation 6).

External Review Process and Research Council Workload

Recommendation 1: Reform the processes and procedures for external evaluations of funding applications

The evaluation team identifies external **peer review** as **crucial** to the transparency and fairness of the evaluation process **but also** as a **key factor contributing to Research Council workload**. It formulates concrete proposals to improve the quality of reviews while reducing workload.

Recommendation 2: Calibrate external reviews

While only a minority of external reviewers see a need for additional training, SNSF stakeholders find that some reviews are too sparse to be usable or contain contradictory information, which make it more difficult to ensure the fairness and transparency of the evaluation procedure and add to Research Councilors' workload. To calibrate external reviews, Coryn et al. propose to provide examples of excellent, acceptable and poor reviews, or other forms of training. The internal monitoring of the external reviews indicates that **new guidelines and forms for reviewers**, in-

¹ <http://www.snf.ch/E/services-for-researchers/Pages/documents-for-researchers.aspx>

troduced in 2011, **have resulted in a more balanced distribution of grades**. Against this background, the SNSF identifies no immediate need for additional training for reviewers. The SNSF will **reassess the situation after two years in the light of new data on the usability of reviews** gathered since 2012.

Recommendation 3: Distribute the work between the NRC and the Administrative Offices more effectively

To further save time and effort for the National Research Council, the evaluation team proposes to **extend the support provided by the Administrative Offices to Research Council members in the external review process**. While the Research Council should, according to Coryn et al. make the final decision about who should be asked to provide reviews, scientific officers can provide Research Council members with an initial list of reviewers. The SNSF shares this point of view and will prepare the implementation of the recommendation, taking into account the organisational implications at the level of the Administrative Offices.

Recommendation 4: Provide for the direct rejection of applications for project funding in all divisions of the NRC

The evaluation also recommends extending the direct rejection – following an initial administrative review but prior to external peer review – of manifestly inadequate applications. Direct rejection is provided for in the Funding Regulations and implemented in certain cases where the track record of the applicant is manifestly inadequate or the research plan clearly lacks substance, but it could be applied more systematically according to the evaluation team. The SNSF welcomes the evaluation team's additional considerations on the conditions under which **direct rejection** can be applied **without prejudice to the fairness and transparency of the evaluation procedure**: objective and explicit criteria for direct rejection should be made public and they should not create a systematic disadvantage for any particular group. On this basis, the SNSF will explore possibilities for harmonising and extending its regulations and practice on direct rejection.

Recommendation 5: Provide compensation for external reviewers

Finally, Coryn et al. propose to consider providing compensation for external reviewers. The authors refer to the theories of social exchange, according to which incentives have a motivating effect and serve to enhance the quality of responses or reviews. Furthermore, they state that over 70% of the external reviewers approached for the evaluation indicated that they would be at least "slightly more willing" to write a review for the SNSF if they received some compensation. Hence, in a best-case scenario, compensation could double the response rate from today's 40% to 80%. It could also reduce the reliance on Swiss reviewers, whose share among all reviewers is, however, already decreasing. In contrast to the theory of social exchange, the motivation crowding theory of Frey suggests that financial rewards or incentives can lead to the suppression (crowding out) of intrinsic motivation.² There have been relatively few studies to date dealing with incentives and increased commitment in the peer-review system. A study published in February 2013 in the "Research Policy" journal simulated the dynamic of the peer review under different incentive conditions.³ The authors of the study came to the conclusion that research funders should be wary of material incentives as they might weaken the reviewer's ethical motives and make self-serving, strategic behaviour seem appropriate. According to this study, the peer-review system

² Frey, B. S. und Jegen, R. (2001), Motivation Crowding Theory, in *Journal of Economic Surveys*, 15(5), 589-611, available online http://www.bsfrey.ch/articles/359_01.pdf.

³ Squazzoni, F., Bravo, G., Takács, K., (2013), Does incentive provision increase the quality of peer review? An experimental study, in *Research Policy*, 42(1), 287-294, available online <http://www.sciencedirect.com/science/article/pii/S0048733312001230>.

without material incentives is the most effective, leading to greater trust and better cooperation. In this context, the SNSF will **focus on improving the communication with reviewers and explore possibilities for non-monetary compensation** such as end-of-the year presents, letters or prizes. Thus it hopes to cultivate reviewers' *taste for science*, a particular preference system in scientific communities described by Merton, in which non-monetary motivations play a major role.⁴

Delineation of funding schemes and clarity of criteria

Recommendation 6: Improve documentation and guidelines for applicants, so that evaluation criteria, procedures, and decision-making processes are clearly delineated and transparent

Information regarding funding schemes, evaluation processes and other information could be made more easily available to applicants according to Coryn et al. A set of quick reference documents complementing current materials, would help delineate evaluation criteria, procedures and processes and make them more transparent. From 2014 a **renewed SNSF Website**, aiming in particular at a more targeted communication with researchers, will provide better access to the recently expanded guidelines for applicants. In order to improve the retrospective understanding of decisions, the SNSF is considering the **introduction of an evaluation report**, which would provide an overall justification of the funding decision on the basis of the external reviews and the appraisal in the competent SNSF evaluation body.

Recommendation 7: Conduct regular, systematic reviews and possible revisions of funding schemes

Moreover, some aspects of the funding schemes may, according to Coryn et al., be misaligned with their intentions. Consequently the evaluation team recommend ongoing regular reviews of funding schemes, with particular attention to be paid to reaching female researchers at an early career stage and junior researchers more generally. In particular, the evaluation team proposes that portioning project funding into a group of long-term and continuing projects and a group of more typical short-term projects would help promote a fair and unbiased evaluation process. The SNSF is considering a **review of project funding**, to distinguish between operating grants supporting research lines over a longer period and project grants to support short-termed research ideas. It will test the envisaged changes in a **researcher survey** to be conducted in 2013. Furthermore **career funding schemes** will be **analysed** in relation to the report on the situation of junior researchers in Switzerland currently in elaboration at the State Secretariat for Research Education and Innovation.

Research Council membership

Recommendation 8: Review and clarify selection procedures for NRC membership

While the evaluation did not point to any evidence that casts doubts on the qualifications or professional competence of the National Research Council, certain points in the selection procedure for members could be made more transparent. The SNSF will conduct an **overall examination of the structure, organisation and tasks of the Research Council** in 2013 and 2014. The review will include the selection procedures for members, which is key to the quality and transparency of evaluation.

8 May 2013

⁴ Merton, R. K., (1973), *The sociology of science: theoretical and empirical investigation*, University of Chicago Press: Chicago, IL.