

# Producing and sharing knowledge on the Swiss higher education and science system

## Position Paper REHES

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14. August 2020, Zürich and Winterthur

## **Summary**

### **On the relevance of research on higher education institutions and science**

The importance of higher education institutions (HEIs) and the societal value they create in research and education has increased considerably in recent decades. As a result of their increased societal value, they interact more strongly with other actors in society. Among other things, this development has led to quantitative and qualitative growth as well as internal change in HEIs and science.

In the context of such far-reaching changes, scientifically based knowledge about structures, actors, and processes in higher education and science is becoming more relevant, particularly in the case of HEIs; however, for the stakeholders in their environment, robust knowledge about complex issues and developments in HEIs and science provides an important orientation function and offers an essential basis for decision-making. In other countries, these broader change processes have been studied by a growing interdisciplinary field of research on higher education and science. In contrast, Switzerland is characterized by a rather low level of institutionalization in the context of this type of research.

### **Promoting exchange of information and ideas between researchers**

The aim of the initiative “Research on Higher Education and Science in Switzerland” (REHES) is to promote, from different disciplinary perspectives, exchanges between researchers who study HEIs and the science system. The aim is also to include all relevant stakeholders in this exchange. On one hand, this should enable research results to be fed into relevant fields of action, such as HEI management or research policy. On the other hand, exchanging information and ideas with stakeholders should also enable questions from practice to be fed into research.

### **Thematic lines of research and forms of institutionalization**

In this paper, we propose thematic lines of research aimed at structuring and, thus, strengthening the exchange of knowledge in research on higher education and science in Switzerland. These thematic lines could serve as a point of departure for future research on the needs of higher education and research policy as well as to questions by the international scientific community. We propose a focus on four different levels of higher education and science: the knowledge society, the higher education system, organizations of higher education, and members of higher education. At all levels, structures and processes, including their prerequisites and outcomes, are to be examined. Additionally, we propose that these four levels are studied not only in isolation but also in terms of their interplay.

Furthermore, we develop scenarios that represent different ways of organizing the sharing of information and ideas aimed at stimulating fruitful discussion on possible forms of institutionalization. In order to facilitate communication between the scientific community and its stakeholders and to help ensure that research also provides answers to practical questions, an interface between these two groups is necessary. Three options for achieving these objectives are outlined in this paper: The REHES network, the REHES society, and the REHES working group within an existing academic society.

Both the thematic lines of research and forms of institutionalization are based on discussions with researchers from relevant fields and stakeholders in the Swiss higher education and science system.

## **I. Aim of the position paper and its development procedure**

With this position paper, we aim to lay the foundations for a fruitful discussion within the REHES community. Therefore, we will present it at the second REHES conference in Lausanne in 2020 in order to obtain feedback and support. In particular, our goal is to stimulate a productive discussion on appropriate institutional forms that promote exchange and coordination between researchers in higher education and science.

In order to achieve the broadest possible support for the project and a high level of agreement, we developed this position paper through several discussions in different group formations as well as through written validation procedures within the REHES working group.

In this paper, we show the relevance of research on higher education and science in Switzerland (Chapter 2), suggest thematic lines for future research (Chapter 3), and present three scenarios that depict how exchange and coordination between researchers in the fields of higher education and science studies could be more strongly institutionalized (Chapter 4).

## **II. On the relevance of research on higher education and science**

### **Higher education institutions as central institutions of the modern knowledge society**

Higher education institutions (HEIs) as places of education and research are central institutions of the education sector and science system. More generally, they can be seen as central institutions of the modern knowledge society.<sup>1</sup> In recent decades, the importance of HEIs and the societal value they create through education and research has increased considerably.

For example, an increasing number of young adults are studying at HEIs. In 1996, the proportion of young people studying at a HEI in Switzerland was 9.5%. By 2019, 29.6% of 25–64-year-olds would have completed a HEI degree, thanks to the establishment of universities of applied sciences and universities of teacher training.<sup>2</sup> The growth in the number of students and staff employed at HEIs<sup>3</sup> and the fulfilment of new obligations have also corresponded to an overall increase in expenditure on HEIs and research,<sup>4</sup> although the growth per person in tertiary education has been very low over the last 20 years.<sup>5</sup> Due to increased societal expectations in relation to science, business and politics have more closely observed the extent to which the education and training provided at HEIs produces “societal” benefits and whether courses of study are relevant to the labor market. The expectations directed at HEIs—especially at “traditional” universities—have shifted for some societal actors from a purely science-oriented to a more business-oriented approach—which is particularly evident in the debate on the employability of HEI graduates in many countries.<sup>6</sup>

The science system in Switzerland has also undergone considerable expansion, whether this is measured in terms of R&D expenditure by the higher education sector<sup>7</sup> or the volume of scientific publications.<sup>8</sup> Furthermore, societal sectors such as politics, the economy, and everyday life are being increasingly shaped by scientific knowledge.<sup>9</sup> In view of this expansion and the increasing importance for other areas of society, science is being observed ever more closely for its usefulness for the social environment. Thus, enabling the visibility of the usefulness of science for society—whether in the narrower economic sense or in relation to questions of ecology and equality—has become an important basis of legitimacy for HEIs and the science conducted within them.

These heightened expectations of usefulness directed at HEIs are perceived as challenges, especially at “traditional” universities. However, such expectations also show how successfully HEIs have established themselves as central institutions of the modern knowledge society and how intensively decision-makers in politics and business, as well as other societal actors, observe and try to shape the performance of HEIs in research and teaching.

### **Higher education and science in transition**

In recent decades, higher education and science have been subject to processes of change, often related to an increase in the mutual influences of HEIs—as places of education and research—and their societal environment.

A significant change in the Swiss higher education sector was initiated through the establishment of universities of applied sciences and universities of teacher education alongside established “traditional” universities. Thus, in accordance with political wishes, the Swiss higher education system has been divided into two types of higher education institutions,<sup>10</sup> each with different functions. However, what exactly this differentiation means and what claims can be made regarding this issue is the subject of ongoing debate, which is illustrated, for example, by the discussion on the right to award doctorates. There is also a discussion regarding whether the types of HEIs are converging and whether the higher education system is de-differentiating accordingly.<sup>11</sup>

The expansion of student numbers not only changes the societal significance of HEIs as educational institutions, the management of these increasing numbers also impacts HEIs as organizations, especially in terms of the organization of courses and lectures and the relationship between research and teaching. The Bologna Process and the associated restructuring of courses of study also brought about numerous changes in teaching.

The transformation of HEIs continues to be strongly influenced by a series of higher education reforms from the 1990s onwards, which were specifically aimed at making HEIs procedurally more autonomous from political administrations while, at the same time, increasing their social responsiveness and accountability.<sup>12</sup> As a consequence of these reforms, one can observe, for example, the process of “managerialization” through the strengthening of HEI management, the training of “new” professionals in the “third space” and their increasing importance, and, as a consequence of the stronger outward orientation, a stronger “medialization” of HEIs and science.

The science system supported by HEIs is also subject to numerous changes resulting from immanent dynamics, such as increasing specialization and internationalization and the reorientation of research toward “grand challenges.” It is precisely this orientation toward increasingly highly specialized and global research contexts that often puts HEIs in a tense relationship with expectations regarding their usefulness for local business and politics, for example, vis-à-vis the needs of local labor markets. However, the increasing inter- and transdisciplinary orientation of research toward grand challenges and societal impact, which is often politically supported, also triggers dynamics and potential friction in the research conducted at HEIs. In short, internal scientific orientations and societal needs at the national or global levels can be at odds with each other. Although Swiss HEIs are, to a considerable extent, based on public funding, a trend toward an increasingly competitive allocation of resources can be observed.<sup>13</sup> This increases the pressure of competition between HEIs<sup>14</sup> as

well as between researchers. The strengthening of competition affects the thematic content of research and is also associated with risks (e.g., in the form of changes in publication strategies or conflicts between researchers).<sup>15</sup> Science is also undergoing a digital transformation, which is being described with keywords such as “big data,” “open science,” or the revived, digitally supported “citizen science.”<sup>16</sup>

### **High relevance of research on higher education institutions and science**

HEIs and their performance in research and teaching are highly relevant to society, and it can safely be assumed that their importance will increase even further.<sup>17</sup> At the same time, higher education and science are faced with numerous developments and challenges, as explained above. In this context, scientifically based knowledge about HEIs and the science system can be considered valuable and essential. For HEIs and their stakeholders, robust knowledge about issues and developments in higher education and science meets the need of orientation in a changing field and offers foundations for decision-making. The self-reflexivity of higher education and science is a prerequisite for their flexibility, agility, and ability to change. In particular, research enables well-founded assessments of how and the direction in which HEIs and the science system will likely develop. Thus, scientifically based knowledge enables the identification of developments at an early stage and provides a solid basis for further courses of action.

### **Low level of institutionalization of research on higher education and science in Switzerland**

As the REHES Workshop 2019 in Berne showed, research on higher education and science is interdisciplinary in nature and answers a variety of questions emerging, in particular, from the transformation of higher education and the science system. In several countries, the field of higher education research developed due to the growth of higher education systems and the political reforms that responded to it.<sup>18</sup> Since its inception, this research field has therefore had a strong action-oriented character.<sup>19</sup> In contrast, science studies—which investigate the logic of science and the relationship between science and its social environment in an interdisciplinary way—are traditionally more reflexive. Yet, science studies also provide foundations for science policy decisions, for example, in the realm of science evaluations and technology transfer.

In view of the above-described high relevance of research on HEIs and science, it is surprising that research in this area in Switzerland is only weakly institutionalized. According to a mapping by the Center for Higher Education and Science Studies (CHESS), there are only a few academic institutions that are permanently involved in research on higher education and science. A mapping by the ZHAW based on publications in the field of higher education research confirmed the view that research on higher education is quite diverse and not very coherent overall. The study concluded that, to date, the field has been rather heterogeneous and fragmented. The finding that there is only weakly institutionalized research on higher education and science in Switzerland is not new. Since the 1990s, members of the scientific community have observed the comparatively low level of research institutionalization on higher education and science in Switzerland. In 2003, the OECD also endorsed this view, at which time observers assumed that this would change because of the emerging changes in the Swiss higher education and science sector, in particular, the New Public Governance reforms since the 1990s.<sup>20</sup> This has hardly happened, although New Public Management reforms and the Bologna Process have significantly changed higher education and the science

system. Moreover, the implementation of the new Higher Education Act (HEdA) (2015) and the establishment of the State Secretariat for Education, Research, and Innovation SERI (2012)—which combines previously separate areas of research (until 2012: SER) and professional training and technology (until 2012: OPET)—lends considerable plausibility to an integrated science-based view of the Swiss higher education and science system.

Comparing the case of Switzerland with those of other national higher education systems also shows that the production of research-based, in-depth knowledge in the field of higher education and science studies in Switzerland is only sparsely institutionalized. In recent years, there have even been tendencies toward a reduction in this area. In contrast, the Anglo-American region has had a strong tradition of applied research on higher education since the educational expansion of the 1960s.<sup>21</sup> Germany has also been disposing of institutions such as the Center for Higher Education Development CHE and the German Center for Higher Education and Science Research DZHW. In individual German states, which may be more appropriate as a benchmark for Switzerland, we can also find state-level institutes for higher education research and HEI development.<sup>22</sup> Smaller countries, such as Norway, the Netherlands, and Austria, have also created institutions that produce knowledge on their higher education and science sectors.<sup>23</sup>

**Objective: An institutionalized form that promotes exchange between researchers**

While research on higher education and science in Switzerland is relatively weakly institutionalized, many researchers are tackling such issues in their academic work. This provides a promising basis for greater institutionalization, as demonstrated at a kick-off workshop of the CHESS initiative “Research on Higher Education and Science in Switzerland” in September 2019. Around 70 participants met to present current research projects and discuss development opportunities for research on higher education and science in Switzerland. The workshop showed that there was a desire for more exchange within the scientific community and a stronger form of institutionalization.<sup>24</sup> The aim of the REHES initiative is, therefore, to strengthen networking opportunities between scientists who approach HEIs and science from different disciplinary perspectives and to bring them into a more intensive and durable exchange. In addition, relevant stakeholders should also be involved in these exchanges. In this way, research results could be incorporated into relevant fields of action, such as HEI management and research policy. Furthermore, exchanges with stakeholders will also enable questions from practice to be fed into research.

In order to strengthen the institutionalization of such exchanges, there is a need for thematic lines of research that simultaneously address internationally recognized research gaps and practical needs. Additionally, proposals are needed on how the exchange of information and ideas can be organized in concrete terms within the scientific community, in particular, but also between the scientific community and stakeholders. This is particularly relevant in terms of the goal of contributing to a reflective and effective Swiss higher education system. For both desiderata, this position paper makes proposals that are strongly based on the exchange within the scientific community as well as with stakeholders.

### III. Thematic lines of research

With the following topics, we identify research fields that are not only of high scientific relevance<sup>25</sup> but can also be of importance to various stakeholders. We think that the proposed thematic lines could serve as guidance within the scientific community, allow for a focused exchange with stakeholders, and, thus, offer a starting point for the further development of the REHES initiative. Nevertheless, our suggestions are not meant to exclude other topics.

We propose a focus on four different levels and an investigation of their interplay: the knowledge society, the higher education system, the higher education organization, and members of the higher education system. Research should examine structures and processes as well as their prerequisites and outcomes.<sup>26</sup> In what follows, we describe relevant questions for each level.

**[Knowledge society] higher education institutions and science in a functionally differentiated society.** HEIs and the research conducted within them display an increasingly intensive interdependency with other societal subsystems, such as politics, economics, and medicine. This gives rise to several important research questions: What are society's expectations of different types of HEIs? How do HEIs and science, which are characterized by a high degree of autonomy, deal with the manifold social expectations they are confronted with from other societal sub-sectors? How do teaching, research, and organizations change as a result of the reactions to expectations formulated by different areas of society? More generally, one should ask how HEIs and science deal with general processes of social change, such as digital transformation. Also, the effects of HEIs and science on their social environment must be examined: What does the presence of a HEI mean for the regional economy or the cultural sector? How do employers react to the increasing availability of HEI graduates with degrees in a variety of often relatively new courses of study? How and through what channels does the dissemination of scientific knowledge work? What contribution do science and HEIs make to processes of social change, such as the process of digital transformation mentioned above?

**[Higher education system] Differentiation and positioning.** This line of research concerns structures and dynamics at the level of the Swiss higher education system. On one hand, an international comparative perspective is relevant here: It is important to relate the characteristics and performance of the Swiss higher education system to comparable higher education systems. On the other hand, it is also relevant to consider internal developments in the Swiss higher education system. How is the higher education system financed, and what are the effects of existing incentive structures, such as research funding and intercantonal compensation mechanisms? Which governance mechanisms are used to steer the higher education system, and what are their objectives? What structural changes will take place in the Swiss higher education system as a result of the implementation of the Higher Education Act (HEdA)? The issue of the (de-)differentiation of types of HEIs is of particular relevance here. At the same time, however, it is also important to examine how individual HEIs position themselves, with whom they compete, where cooperation exists, and what effects result from their behavior toward other HEIs.

**[Higher education organizations] Effects on education, research, knowledge transfer, and administration.** In many countries, the governance reforms from the 1990s onwards,



which were strongly influenced by New Public Management, provided a strong impetus for research on higher education.<sup>27</sup> However, there is comparatively little research on Switzerland. As such, there is a need for studies on the governance of HEIs and science in Switzerland, including in comparison with each other and with regard to ensuing change over time. Beyond the widespread typification of forms of governance based on regulatory texts, there is a particular need for studies on HEI management, HEI governance, and the implementation of governance mechanisms in HEIs: How strongly, for example, have New Public Management reforms affected the organizational everyday life of HEIs in terms of teaching, research, knowledge transfer, and administration? What is the “lived” governance of HEIs in Switzerland? Furthermore, the desired, undesired, and unintended effects of governance reforms should be investigated. However, research on governance should not only focus on changes in the organization of higher education; it should also examine the effects of these changes on scientific knowledge, academic freedom, and the research conducted at HEIs.

**[Members of higher education institutions] Research on the “careers” of individuals in the science and higher education system, their conditions, and consequences.** Another important research area is the study of members of HEIs, from students and academic staff to “new” professionals and administrative staff.<sup>28</sup> A central and politically relevant topic here is the issue of equal opportunities: What are typical educational trajectories and professional–biographical careers at HEIs, and how can they be explained? What determines success and failure in studies and careers? How do motives and identities that lead to certain career paths emerge and solidify? What are the effects of human resource policy on the performance of HEIs? Not surprisingly, research on students at HEIs shows a strong connection to the topic of the societal importance of HEIs. In particular, an important line of investigation is the extent to which HEIs contribute to social (in)equality and the measures that can be taken to counteract this. Research on academic staff relates to the issue of the permeability of the education system and, thus, to the issue of equal opportunities. Furthermore, this level can also be used to examine questions of the exchange relationship between the higher education sector and its social environment. For instance, the much-discussed post-doc bubble or the frequently discussed shortage of skilled workers in STEM subjects are important questions regarding this issue.

#### **IV. Forms of Institutionalization**

In order to strengthen research on higher education and science in Switzerland as well as the exchange of ideas within the research community, there is a need not only for agreement on relevant topics but also for formats and structures that ensure long-term exchange and enable stakeholders to address the scientific community. In order to achieve this goal, the initiative must come from the scientific community itself, as instantiated through the discussions at the first REHES workshop. Forms of institutionalization can show different degrees of formalization. In order to facilitate communication between the scientific community and stakeholders, an interface between these two groups of actors is necessary. The task of an interface, which would be set up on a permanent basis in all the scenarios described below, would be to bundle interests on both sides and facilitate communication in both directions. This would increase the chances that the knowledge produced in research on higher education and science is also future-oriented and practically relevant.

Below, we discuss three scenarios that facilitate exchange within the scientific community and with stakeholders. All variants are aimed at the same goals: First, the sharing of information and insights between scholars working on issues of higher education, the science system, and the relation of these two areas to the broader society should be promoted. Ideally, this would help researchers identify common interests and the potential for cooperation. Second, giving the exchange with stakeholders a more permanent organizational form should help transfer research findings into practice and identify research questions that are also of practical relevance. Third, the scenarios should foster the international visibility of research on higher education and science in Switzerland. This would help the Swiss research community position itself in the global community and facilitate international research cooperation.

The initial institutionalization steps proposed below require bottom-up support from the scientific community. In order to secure the next generation of researchers in this field, it would also be essential to establish professorships, research groups, and centers at HEIs in a more “top-down” manner.

**The REHES network:** A network would ensure internal exchange within the Swiss community and make it more visible to the international scientific community, stakeholders, and the wider public. Membership would be acquired via an informal application. Members would be listed on the REHES network website, which would create a certain commitment and visibility. The network would also manage the relationship of the scientific community with stakeholders and the wider public. The exchange within the community and with stakeholders would be organized through a permanent series of events (e.g., annual REHES meetings), a mailing list (the existing REHES list, adapted as a “membership list”), and a website. Through this network, further formats of mutual information, opportunities for research cooperation, and the pursuit of common interests could be developed and established. This network would require a coordination office to structure internal and external communication. Ideally, this would be located in a relevant organization, which would provide the necessary resources or support their acquisition. The coordination function could be taken over by different organizations on a rotational basis.

**The REHES academic society:** An academic society organized as an association would pursue the same objectives as a network, albeit within a more legally formalized framework.

The advantage is that it would be easier to address the scientific community externally and that the internal goals, procedures, rights, and obligations associated with membership would be more clearly defined and, thus, more binding. Furthermore, in contrast to the network proposal discussed above, an association would formally be more independent of the supporting organizations. Disadvantages, however, would lie in the greater operational costs and the question of whether enough active and passive members could be mobilized to operate an academic society in a meaningful way, i.e., with the performance of essential tasks. An academic society organized as an association could, in the medium term (after three years of independent existence), also be accredited by the SAGW (Swiss Academy of the Humanities and Social Sciences) and supported with resources through the latter.

**The REHES working group in an existing professional association:** Another possibility would be to establish a “subsection” within an established academic society. This would enable the pursuit of the same objectives covered in the first scenario (“Network”). In principle, the sts-ch—Swiss Association for the Studies of Science, the Swiss Society for Sociology (as a research committee)—or the Swiss Society for Educational Research could be considered (as a working group). The advantage here would be that REHES could draw on existing structures, and the status of a “subsection” would require a smaller “critical mass” of members than would be the case for an independent academic society. The disadvantage here, however, is that the existing academic societies fit only to a limited extent: Disciplinarily organized societies (e.g., the Swiss Society of Sociology) are less suited to the interdisciplinary demands of REHES. The above-mentioned, more topically oriented societies tend to favor interdisciplinarity but focus on education (Swiss Society for Educational Research) or science (sts-ch), not both. In the Swiss Society for Research on Education, there is, however, a working group “HEI Research and Didactics,” whose orientation differs from that of the REHES initiative (i.e., it focuses specifically on didactics).

## Overview of possible forms of institutionalization

Form	Dynamic network with low degree of formalization	Academic Society	“Working group” in academic society
Role model(s)	<ul style="list-style-type: none"> <li>• <a href="#">Netzwerk Hochschulforschung Österreich</a> (Austria)</li> <li>• <a href="#">STS in Germany</a> (Germany)</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">sts-ch</a> – Swiss Association for the Studies of Science</li> <li>• <a href="#">The Swiss Society for Research in Education</a> (SSRE, “Switzerland)</li> <li>• <a href="#">Gesellschaft für Hochschulforschung</a> (GfHf, Germany)</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Arbeitskreis Wissenschafts- und Hochschulforschung</a> (in the subsection of the German Association of Sociology “Wissenschafts- und Technikforschung,” Germany)</li> <li>• Working Group “<a href="#">Hochschulforschung und -didaktik</a>” in the Swiss Society of Research in Education)</li> <li>• Research committee “<a href="#">Bildungssoziologie</a>” in the Swiss Association of Sociology</li> </ul>
Pros	<ul style="list-style-type: none"> <li>• Dynamic: scalable and adaptable to circumstances</li> <li>• Little self-administration effort</li> </ul>	<ul style="list-style-type: none"> <li>• A collective actor is more independent than a dynamic network</li> <li>• Stronger collective decision-making capacity</li> <li>• Internal consequence: higher commitment</li> <li>• External consequence: stronger addressability</li> <li>• Support by SAGW possible on probation</li> </ul>	<ul style="list-style-type: none"> <li>• Clear location in an existing and known structure</li> <li>• Disadvantages of an independent “academic society” somewhat reduced (especially with regard to time and effort)</li> </ul>
Cons	<ul style="list-style-type: none"> <li>• Little autonomy as a collective actor (e.g., with regard to resource management)</li> <li>• Low collective decision-making capacity</li> <li>• Internal consequence: low liabilities in terms of rights and obligations</li> <li>• External consequence: low addressability in contrast to formally organized structures</li> <li>• Hence, also: fragile form of institutionalization</li> </ul>	<ul style="list-style-type: none"> <li>• More rigid as a dynamic network</li> <li>• Greater need for self-administration (more personnel resources for filling offices)</li> <li>• Long-term survivability unclear (and, thus, unclear whether the “effort” of creating the association is worthwhile)</li> </ul>	<ul style="list-style-type: none"> <li>• Advantages of an own professional association somewhat weakened (independence)</li> <li>• No existing professional association in Switzerland fits really well</li> </ul>
Measures	<ul style="list-style-type: none"> <li>• Clarify how the network is to be coordinated in concrete terms</li> <li>• Clarify next goals (e.g., series of events, meetings, joint publications, etc.)</li> <li>• Obtain support from relevant research centers</li> <li>• Clarify what contribution existing research centers want to network</li> </ul>	<ul style="list-style-type: none"> <li>• Form a working group to draft the association's statutes</li> <li>• Filling the necessary offices and founding the professional association</li> <li>• Acquiring members and identifying and implementing suitable means for realizing the association's goals</li> <li>• Clarify association financing: membership fees, donations, mandates, etc.</li> <li>• After three years, clarify the possibility of accreditation with the SAGW</li> </ul>	<ul style="list-style-type: none"> <li>• Clarifying the possibility and conditions of a “REHES working group” in existing academic societies</li> <li>• Selection of the most suitable academic society</li> <li>• Clarify next goals (e.g., series of events, meeting, joint publication, etc.)</li> </ul>

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- <sup>11</sup> See topic profile refinement/portfolio optimization in swissuniversities (2018). Strategische Planung 2021–2024 von swissuniversities. For the attention of the Schweizerische Hochschulkonferenz. Bern.
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- <sup>13</sup> Benninghoff, M., Perellon, J. & Leresche, J. (2005). L'efficacité des mesures de financement dans le domaine de la formation, de la recherche et de la technologie, Cahier de l'OSPS, (12). Lausanne: OSPS; Lepori, B., Benninghoff, M., Jongbloed, B., Salerco, C. & Slipersaeter, S., (2007). Changing models and patterns of higher education funding: some empirical evidence. In: Bonnacorsi, A. & Daraio, C. (eds). *Universities and strategic knowledge creation*. Cheltenham: Edward Elgar, S. 85–110.
- <sup>14</sup> Krücken, G. (2019). Multiple competitions in higher education: a conceptual approach. In: *Innovation*. Online first 6. November 2019. DOI: 10.1080/14479338.2019.1684652
- <sup>15</sup> Jerke, J., Diekmann, A. & Rauhut, H. (2020). *Not everything was better in the old days, just different. Publication Bias and other trends in the economic literature since 1959*. University of Zurich. Unpublished Paper; Johann, D., Velicu, A. & Rauhut, H. (2020). Ko-Autorschaft von wissenschaftlichen Publikationen. Kooperationen und Konflikte. In: *Forschung & Lehre* 6/2020; Johann, D. & Neufeld, J. (2016). Performance-based allocation of funds, pressure to publish and publication strategies, Vortrag bei der Society for Social Studies of Science (4S)/European Association for the Study of Science and Technology (EASST) Conference, Barcelona.
- <sup>16</sup> cf., e.g., that the SBFI, swissuniversities, SNSF and the two Federal Institutes of Technology have agreed that a national open research data strategy should come into force in 2021.
- <sup>17</sup> Future (2019). Gemeinsames Positionspapier der Schweizer Hochschulen und der Institutionen der Forschungs- und Innovationsförderung. Bern.
- <sup>18</sup> Hüther, O. & Krücken, G. (2016). Hochschulen. Fragestellungen, Ergebnisse und Perspektiven der sozialwissenschaftlichen Hochschulforschung. Wiesbaden: Springer VS, S. 301.
- <sup>19</sup> Teichler, U. (1994). Hochschulforschung - Situation und Perspektiven. In: *Das Hochschulwesen* 42(4), S. 169.
- <sup>20</sup> Mapping of higher education research by ZHAW see: <https://www.zhaw.ch/de/ueber-uns/organisation/rektorat/hochschulentwicklung/projekte-hochschulforschung/#c132217> (03.07.2020). For the mapping of research on higher education and science in Switzerland by CHES, see [https://www.rehes.uzh.ch/dam/jcr:016240b8-6145-4ce1-a558-3114724e8598/Kartierung\\_REHES\\_Mai2020.pdf](https://www.rehes.uzh.ch/dam/jcr:016240b8-6145-4ce1-a558-3114724e8598/Kartierung_REHES_Mai2020.pdf) (13.08.2020). For a discussion of the state of research on higher education and science in Switzerland, see the contributions by Ursula Streckisen, Edo Poglia and Ulrich Teichler. In: Herbst, M., Latzel, G. & Lutz, L. (1997). *Wandel im tertiären Bildungssektor. Zur Position der Schweiz im internationalen Vergleich*. Zürich: Hochschulverlag / Zur Empfehlung der OECD, *Forschung zu Hochschulen und Wissenschaft in der Schweiz zu institutionalisieren* siehe; OECD (2003): *Reviews of national policies for education: tertiary education in Switzerland*. Paris: OECD, S. 208ff.
- <sup>21</sup> Rumbley, L. et al. (2014). *Higher education. A worldwide inventory of research centers, academic programs and journals and publications*. Bonn: Lemmens.
- <sup>22</sup> Bayrisches Staatsinstitut für Hochschulforschung und Hochschulplanung (IHF), Leibniz Center for Science in Society LCSS, Robert-K.-Merton-Zentrum für Wissenschaftsforschung, International Center for Higher Education Research und Institut für Hochschulforschung HOF.

<sup>23</sup> Norwegen: NIFU (Nordisk Institutt for studier av innovasjon, forskning og utdanning), Niederlande: Center for Higher Education Policy Studies, Österreich: Center Educational Management and Higher Education Development. In Austria, the Federal Ministry of Education, Science and Research (BMBWF) also supports the establishment of a network for higher education research.

<sup>24</sup> For this event, please see the corresponding website, which includes video recordings of the contributions as well as a detailed conference report: <https://www.rehes.uzh.ch/de.html> (03.07.2020).

<sup>25</sup> The exemplary selection is also based on a comparison of the research topics mentioned by participants of the REHES Workshop 2019 in Bern.

<sup>26</sup> The proposed thematic lines of research can be placed into common categories of higher education research topics (siehe: Kehm, B. & Teichler, U. (2013). Organisational strategy and the profile of CHER members. In: Kehm, B. & Musselin, C. (eds.): *The development of higher education research in Europe: 25 years of CHER*. Rotterdam/Boston/Taipei: Sense, S. 25–33; Teixeira, P. (2013). Reflecting about current trends in higher education research: A view from the journals. In: Kehm, B. & Musselin, C. (Eds.): *The development of higher education research in Europe: 25 years of CHER*. Rotterdam/Boston/Taipei: Sense, S. 103–121.)

<sup>27</sup> Grande, E. et al. (Hrsg.) (2013). *Neue Governance der Wissenschaft: Reorganisation – externe Anforderungen – Medialisierung*. Bielefeld: transcript.

<sup>28</sup> Hamann, J. et al. (2018). Aktuelle Herausforderungen der Wissenschafts- und Hochschulforschung. Eine kollektive Standortbestimmung. In: *Soziologie* 47(2), S. 190.