



Federation of Finnish  
Learned Societies

# PUBLICATION FORUM SELF- EVALUTAION

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# JUFO IN A NUTSHELL

- Publication Forum (JUFO) is a Finnish national classification system of peer-reviewed publication channels across all fields of science, established in 2010.
- 250 experts in 23 panels categorise journals and book publishers into four classes (0-3) according to editorial and peer-review standards, and average quality, impact, and prestige.
- Since 2015, JUFO classification is one of the performance-based funding criteria of universities. Currently, 2021-2024, 14% of funding is based on publications and JUFO.
- Encourages publishing in channels that are valued by the scientific community, demanding in terms of peer reviews, and reach the widest critical expert audience.

<b>JUFO level</b>	<b>Number of journals/series in JUFO</b>	<b>Number of book publishers in JUFO</b>	<b>Points for articles</b>	<b>Points for monographs</b>
3 = Top	654 (2 %)	15 (0 %)	4	16
2 = Leading	2242 (8 %)	91 (3 %)	3	12
1 = Basic	19837 (71 %)	1203 (40 %)	1	4
0 = Other	5047 (18 %)	1710 (57 %)	0.1	0.4



# 1. SELF-EVALUATION



# SETTING-UP THE SELF-EVALUATION

- Since the establishment of JUFO system, concerns have been raised about the legitimacy, validity, neutrality and effects of JUFO indicators across different fields.
- In Finland – unlike Denmark (2012) and Norway (2014) that use similar model – the JUFO based system has not been comprehensively self-evaluated.
- JUFO Steering Group decided in 2016 to carry out a self-evaluation of JUFO system during 2019–2020, and appointed a working group from among its members:
  - Jaakko Aspara – chair of the working group (Hanken School of Economics & Universities Finland)
  - Hanna-Mari Puuska (CSC – IT Center for Science)
  - Elina Pylvänäinen (Federation of Finnish Learned Societies), since May 2020
  - Janne Pölönen (Federation of Finnish Learned Societies)
  - Risto Rinne (University of Turku)
  - Eeva Savolainen (Federation of Finnish Learned Societies), until April 2020
  - Matti Kajaste (OKM) followed the work of the group



# PURPOSE OF SELF-EVALUATION

- Several broad-based working groups appointed by the Ministry of Education and Culture have considered the fitness of the JUFO system for the universities' funding model.
- Overall effects on performance-based funding system have been investigated in two reports:
  - *Yliopistolakiuudistuksen vaikutusten arviointi* (Ministry of Education and Culture, 2016)
  - *Yliopistojen rahoitus, kannustimet ja rakennekehitys* (Economic Policy Council, 2018)
- JUFO Steering Group is responsible for the development of the JUFO classification, so it was agreed that the self-evaluation should:
  - not consider the effects of the Ministry's funding model, or of JUFO system as part of it
  - focus on the **organisation, validity, and use** of the JUFO classification as a quality indicator
- The main purpose of the self-evaluation was to **support the further development and improvement** of the JUFO classification.

*E.g., Chapter 6: What kind of changes in publishing patterns in Finland have **coincided** with the introduction and adjustments of JUFO classifications*

(not "effects", "influences", or even "correlations").

*Not intending to*

- assess the weights of JUFO classes in Ministry's funding model
- provide conclusive/causal evidence of JUFO's effects on publication performance of Finnish universities.

# METHODS OF SELF-EVALUATION

The self-evaluation builds on:

- earlier research, reports, literature, and documentation on the JUFO system
- newly collected data and analyses specifically designed for this self-evaluation
  - VIRTA: a bibliometric analysis of Finnish universities' publications 2011–2017 based on institutional CRIS data integrated at national level.
  - WoS: a bibliometric analysis of Finnish universities' publications based on Web of Science data 2011–2015.
  - Panellist 2019 survey: an analysis based on data from online survey to members of the Publication Forum Expert Panels between 2010 and 2019.



# QUESTIONS OF SELF-EVALUATION

- The objective of the self-evaluation was to address 5 *evaluation questions* → **chapters 2-6** of the report).
- The self-evaluation working group also offers 12 **recommendations** and 7 **considerations** for the **further development** of the JUFO system → **chapter 7**.

REPORT	MAIN QUESTION
Chapter 1	Introduction
Chapter 2	<i>1. How do the logic and working of JUFO compare with international benchmarks?</i>
Chapter 3	<i>2. Are the JUFO procedures organised effectively?</i>
Chapter 4	<i>3. Do JUFO classification levels provide a valid and balanced quality indicator across fields?</i>
Chapter 5	<i>4. For what purposes is the JUFO classification used in the scientific community in Finland?</i>
Chapter 6	<i>5. What kind of changes in publishing patterns in Finland have coincided with the introduction and adjustments of JUFO classifications?</i>
Chapter 7	Recommendations and considerations



# 2. MAIN RESULTS



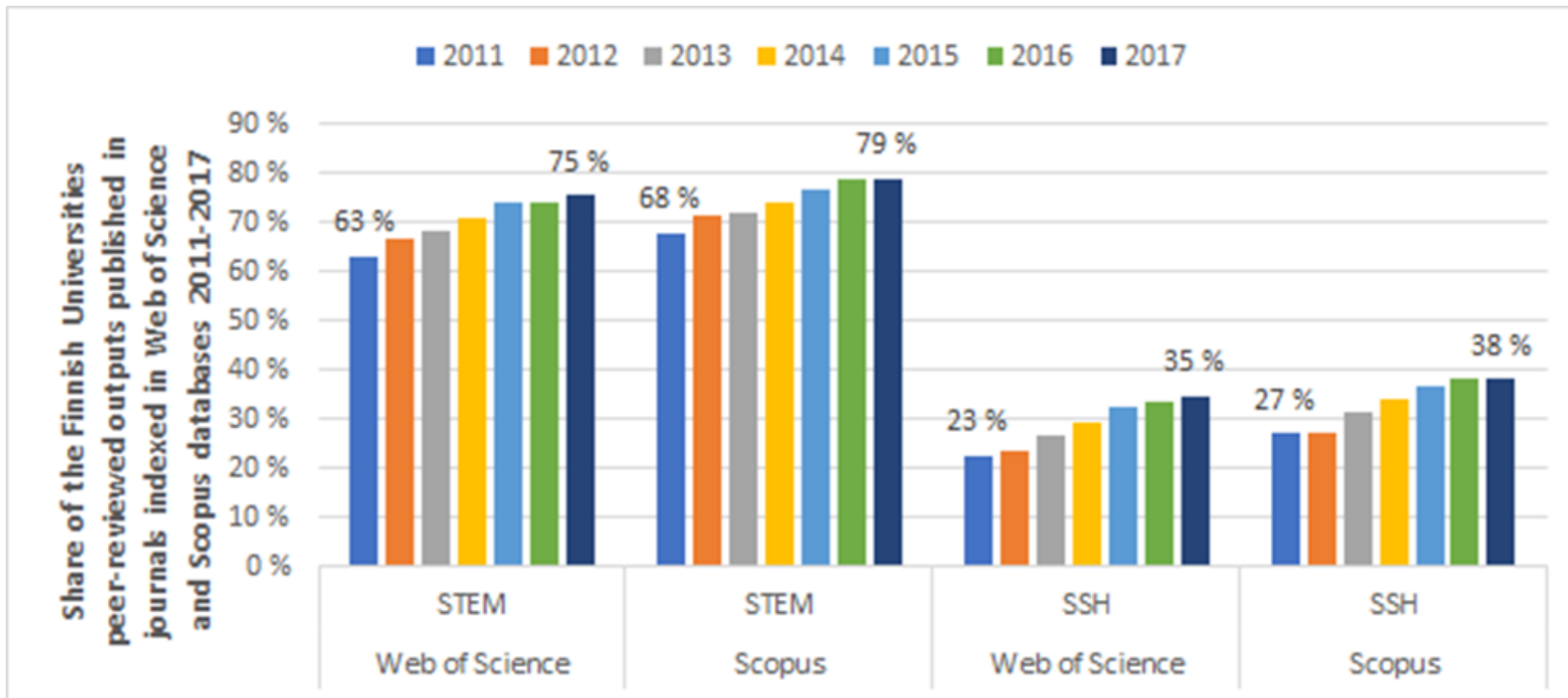


# 1. HOW DO THE LOGIC AND WORKING OF JUFO COMPARE WITH INTERNATIONAL BENCHMARKS?

- As a classification system of publication channels, JUFO represents
  - an evaluation model originally developed in Norway and
  - later adopted in some other European countries (e.g. Denmark, Flanders, Poland)for distributing government funding to higher education institutions based on their publication performance.
- Compared to publication performance indicators based on international databases (e.g. Web of Science and Scopus) and their impact factors, a JUFO type of system has
  - better coverage of peer-reviewed publication channels (of different fields, types, languages)
  - anchorage in not only the international scientific community but also the national context
- Consistent, also, with the main principles of responsible metrics, such as robustness, transparency, diversity, and reflectivity
  - as focusing on assessing macro-level publishing performance of universities rather than individual publications or researchers



**Figure 2.1. While the share of Web of Science and Scopus indexed publications of Finnish universities increased in 2011–2017, the share remains low in the fields of Social Sciences and Humanities (SSH).**



## 2. ARE JUFO PROCEDURES ORGANISED EFFECTIVELY?

- A classification system like JUFO is a very cost-effective way of organising the overall quality assessment of publication output for the performance-based funding model of Finnish universities.
- Compared to similar systems abroad, JUFO maintains a comprehensive list of publication channels with a smaller number of expert panellists than Denmark and Norway.
  - This suggests that JUFO also has somewhat higher efficiency than the most immediate international benchmarks.
  - At the same time, this elicits a concern about the panellists' workload.
- The panellists' workload can be decreased by shifting some of their tasks to the JUFO secretariat, and by improving the information and web tools, particularly the JUFO portal, supporting the panellists' evaluation tasks.



# COST-EFFECTIVENESS OF JUFO

- One possible indicator of the effectiveness of a research assessment system is
  - the **ratio of all administrative costs of the funding agency in the total budget of the agency** (including funds granted for research, as well as the administrative costs).
  - Denominator: The Ministry of Education and Culture annually **distributes more than 200 Million Euros** (13%) of core funding for universities based on publications and JUFO levels
- If only calculating the **direct costs** of JUFO
  - (the ~ 250,000 euros granted by Ministry of Education and Culture annually to fund the JUFO operation)
  - → ratio of JUFO's direct administrative costs to the total funding allocated by the Ministry: **0.13%**.
- If including an estimate of **indirect costs** , as well
  - (estimated indirect labour costs of panel experts' time and effort: 385,000–740,000 euros. → Total costs: 635,000–990,000 euros.)
  - → ratio of JUFO's total direct and indirect costs to the total funding allocated by the Ministry: **0-3-0.5%**.

As the indirect costs form the majority of costs, it is possible to further increase the total cost-effectiveness of JUFO by reducing some indirect costs (time and effort required from experts) – even if it somewhat increased direct costs.

See e.g. recommendation R7.

# WORKLOAD OF PANELLISTS AND SECRETARIAT

- Three key differences in the organisation of the evaluation of publication channels make the procedure more burdensome in Finland compared to Denmark or Norway:
  - New channels are identified based on VIRTA publication data (not just suggestions, as NO and DK)
  - Level 0 publication channels are registered and maintained (not just levels 1-3, as in DK)
  - Unused channels are not excluded from the register (could be excluded, as in DK)
- Overall, the amount of work is assumed to be larger on average for individual experts in Finland than it is in Denmark or Norway because:
  - Finland involves the smallest number of experts (250 compared to 331 in NO and 429 in DK)
  - the number of channels to be evaluated is relatively large and increasing (especially level 0)
  - the experts are involved in the evaluation of channels for all levels (only level 2 in NO)
  - the interval between reviews of levels 2 and 3 is longer in Finland than in the other Nordic countries.



### 3. DO JUFO CLASSIFICATION LEVELS PROVIDE A VALID AND BALANCED QUALITY INDICATOR ACROSS FIELDS?

- JUFO levels are a relatively neutral quality indicator of the universities' publication output across the main scientific fields, including multidisciplinary publications.
- JUFO classifications also take national languages and open access adequately into account.
- There are no indications of severe national bias that would compromise the validity of JUFO classifications as a measure for the average quality of the Finnish universities' publication output.
- The expert-based JUFO classification of publication channels corresponds, largely, with other indicators of publication quality and impact
  - e.g., the citation analysis of the impact of Finnish research
  - and research projects which have received funding based on the international peer review).

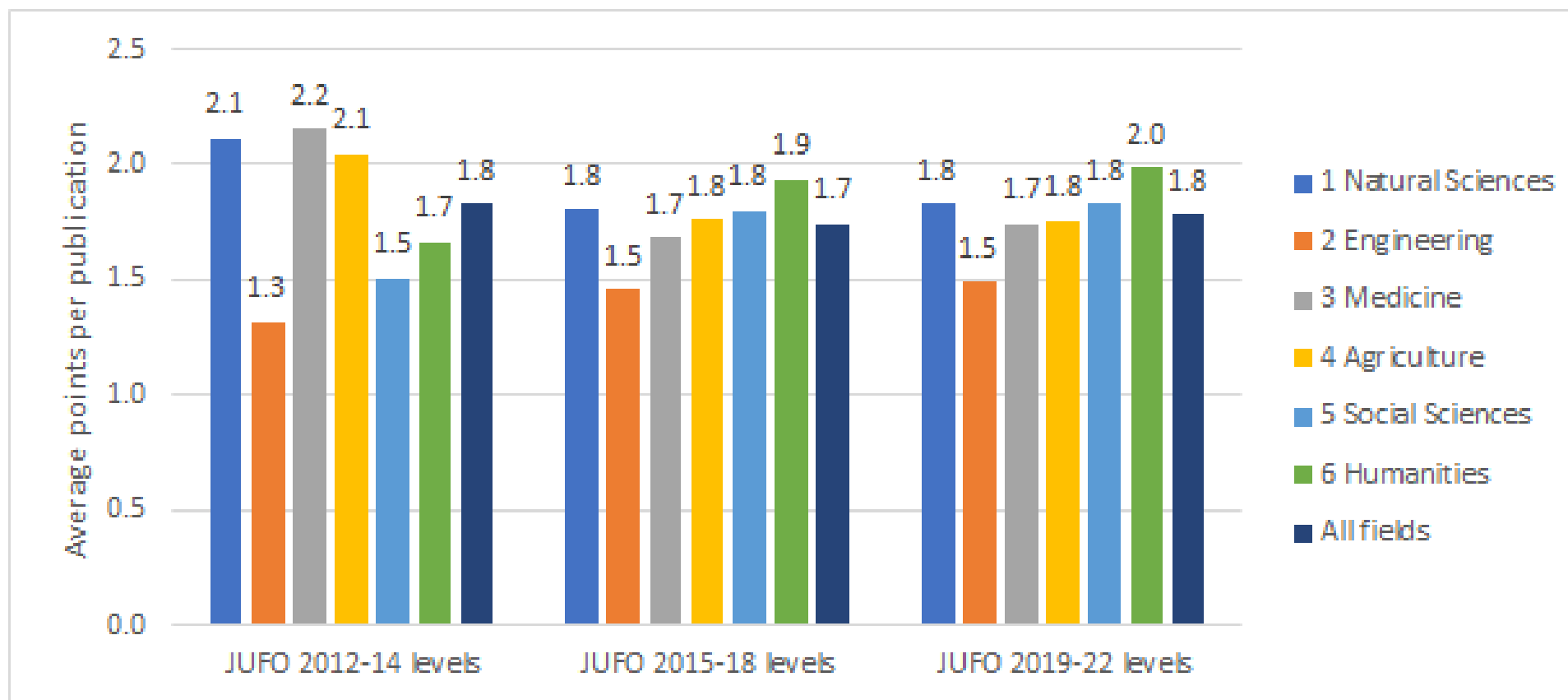


# PANELLISTS' VIEWS ON NUMBER AND QUOTA OF JUFO LEVELS (2 and 3)

- While JUFO level 3 is controversial, there is no strong consensus among the research community about whether JUFO levels 2 and 3 should remain separate or not.
- The vast majority, 89%, of 170 panellists answered that **either four (0, 1, 2, 3) or three JUFO levels (0, 1, 2) are needed**, while only a minority of experts thought that only two levels (0, 1) were sufficient, or that more than four levels were needed.
- Respondents considered the **distinction between levels 2 and 3 the most difficult and less important**, compared with the distinction between levels 2 and 1, and 1 and 0.
- Majority of respondents (67%) considered that the publication **volume share of JUFO level 3 should be increased to 10%**, and the volume share of **JUFO level 2 should be increased to 25% or 30%**.
- Majority of respondents (62%) considered that **using the publication volume** as the basis for the level quotas **increased the difficulty** of evaluation considerably or very considerably, and that **its effect should be decreased**.

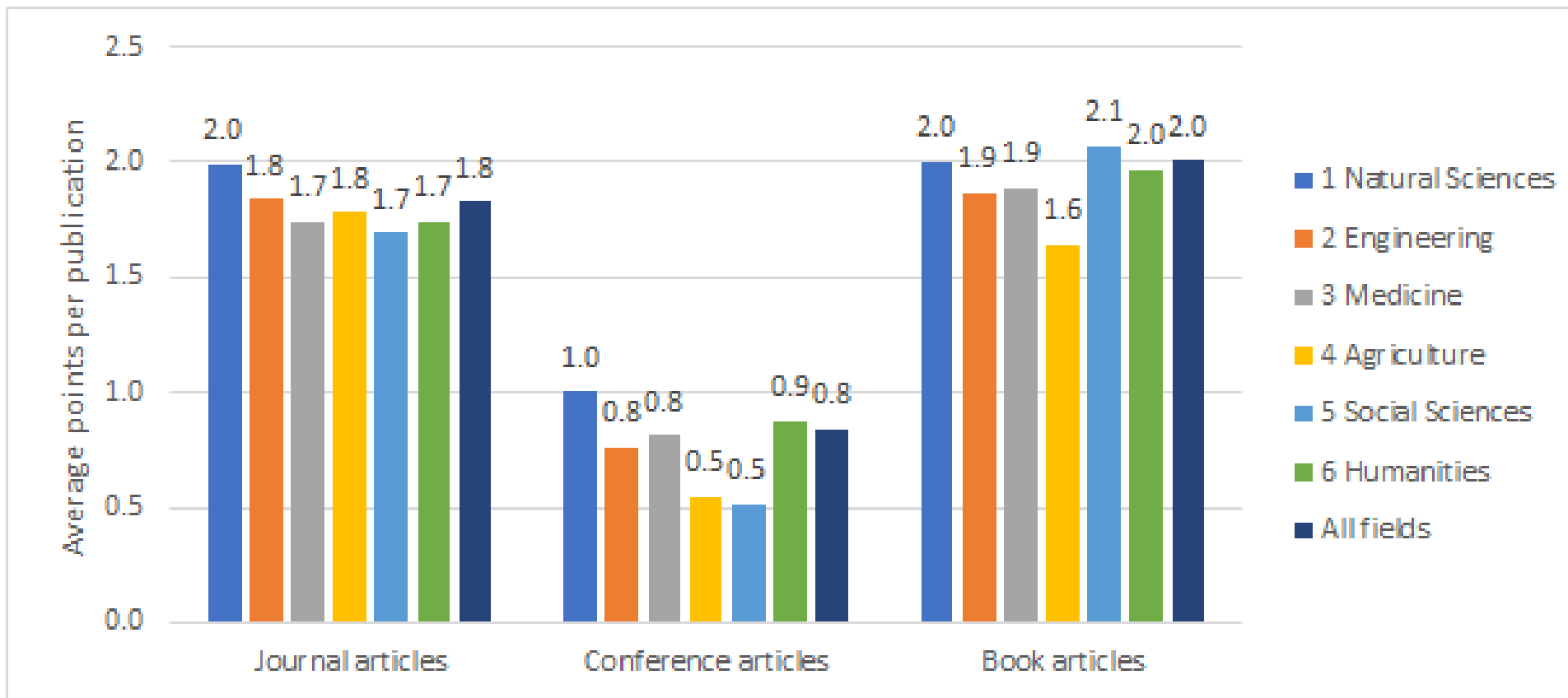


**Figure 4.13. On average, peer-reviewed publication outputs from the various main fields yield a fairly similar amount of publication points per output, and the differences have become smaller since 2015.**

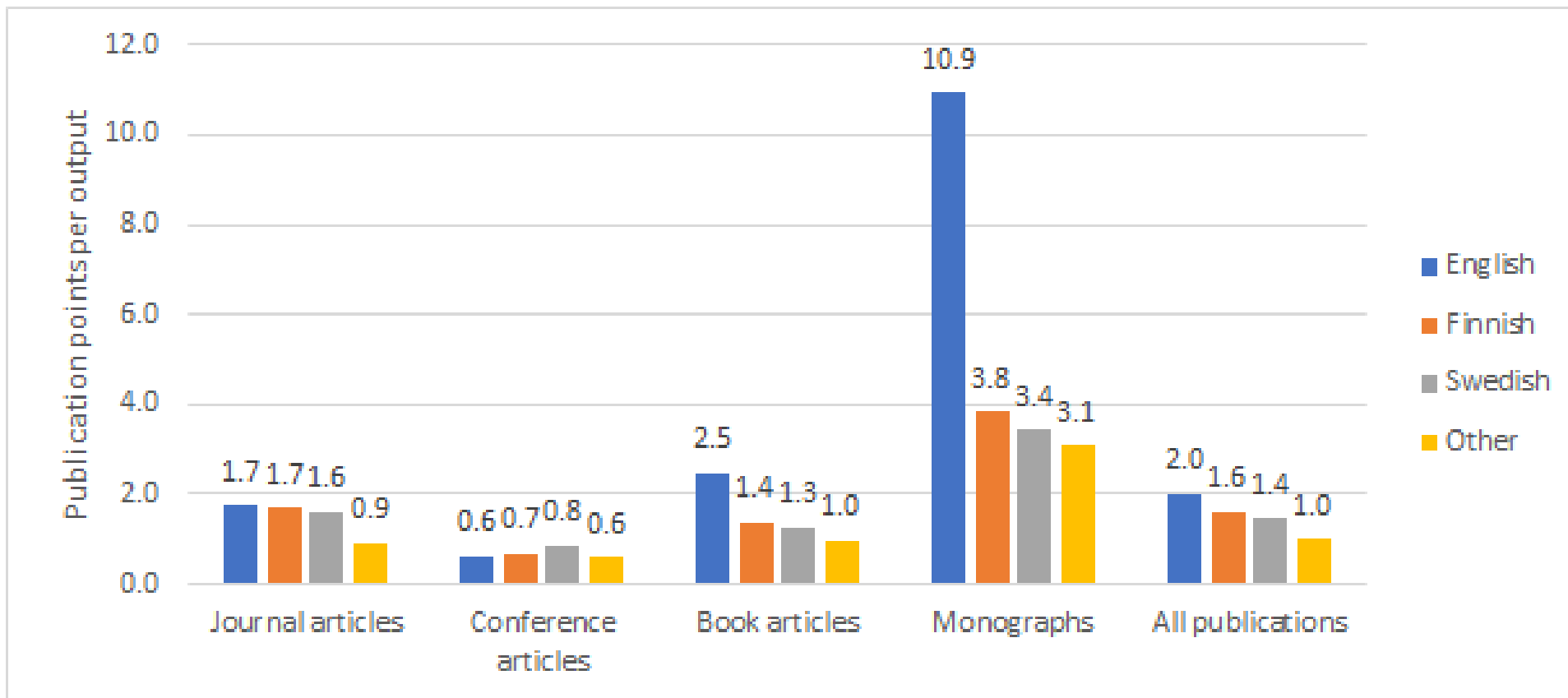




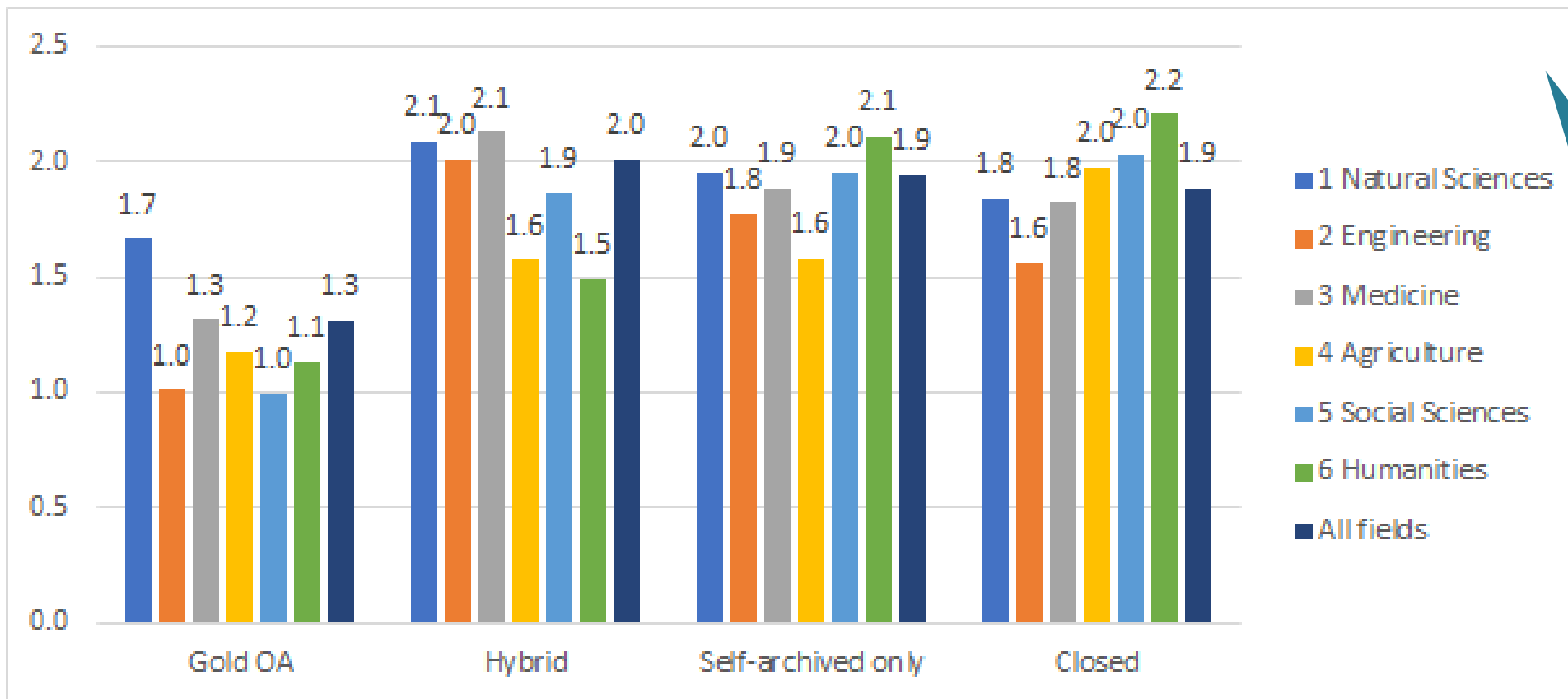
**Figure 4.15. The differences in average JUFO publication points yielded by different publication types are fairly consistent across fields.**



**Figure 4.17. In the Social Sciences and Humanities, English-, Finnish-, and Swedish-language articles in journals are approximately equally valuable, however, English-language monographs and articles in books have an advantage**



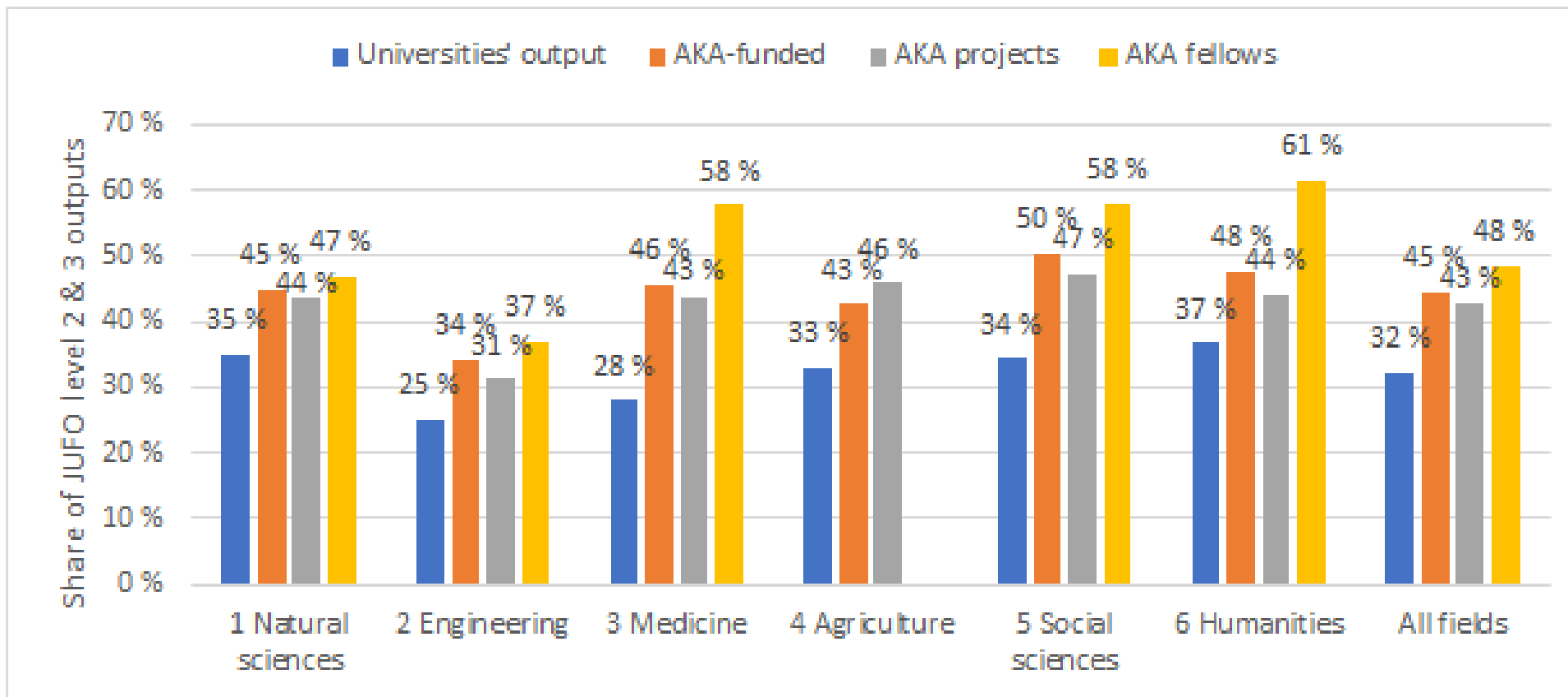
**Figure 4.18. On average, Gold OA publications yield a smaller number of JUF0 publication points per output than Hybrid and Green (self-archived only) OA publications or closed publications.**



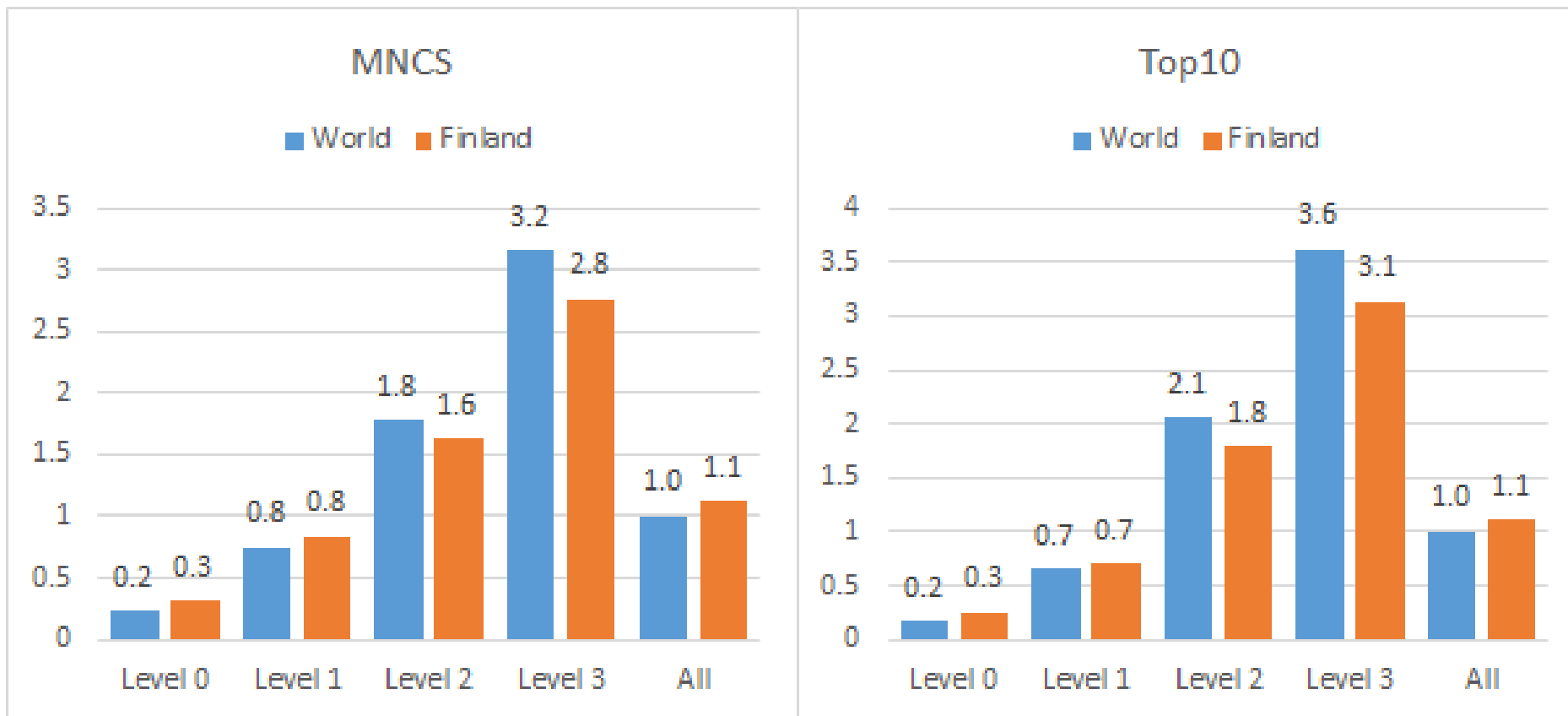
As of 2021, the average point value of all types of OA publication will increase by 20% compared with closed outputs in the universities' funding model.



**Figure 4.10. A larger share of publications originating from research funded by the Academy of Finland is published in JUFO level 2 and 3 channels than the Finnish universities' peer-reviewed publication output in general (2015–2017).**



**Figure 4.11. Citation impact of the Finnish output published at higher JUFO levels is consistently stronger than the citation impact of output in lower JUFO level journals (2011–2015) (World average = 1)**



## 4. FOR WHAT PURPOSES IS THE JUFO CLASSIFICATION USED IN THE SCIENTIFIC COMMUNITY IN FINLAND?

- The primary – and only official – use purpose of JUFO is to serve as an indicator of the quality of universities' publication performance for the funding model of the Ministry of Education and Culture.
- As in Denmark and Norway, also Finnish universities and other actors also use JUFO classifications for secondary, unofficial purposes. These include uses of JUFO to support universities' research assessments, to monitor and develop publishing activities, and for funding allocation to subunits.
- Based on earlier studies, we know that in all Nordic countries some institutions use the national publication channel classifications for evaluations at the individual level, more commonly in the Humanities and Social sciences than the other fields.
- To prevent the inappropriate use of JUFO levels for the evaluation of individual researchers, the JUFO's Steering Group has published a guideline for the responsible use of the JUFO classification.



# USE OF JUFO CLASSIFICATIONS IN THE FUNDING MODEL OF UNIVERSITIES

- The JUFO system provides the funding model with a community-curated, regularly updated, comprehensive, and transparent measure of the average quality of the universities' diverse publication outputs to inform funding distribution.
- The JUFO levels are used to calculate funding based on a three-year average count of publications, including around 75,000 peer-reviewed outputs produced by the Finnish universities during the three previous years.
  - A publication-specific expert evaluation would constitute an unreasonable amount of work for the research community.
- There are some differences between Finland, Denmark, and Norway in counting and weighting of publications according to different publication types and channel levels
  - Funding model includes not-peer-reviewed and level 0 publications (excluded in DK and NO)
  - Book articles in ISSN series and ISBN publishers have same weight (unlike DK and NO)
  - Weighing of monograph vs. article is weaker on level 1 and stronger on level 2 and 3
  - Co-authorship is not considered (different fractionalizations in DK and NO)



# UNOFFICIAL USES OF JUFO: THE CASE OF INSTITUTIONAL RESEARCH ASSESSMENTS

- Since 2010, the universities have been responsible for evaluating their education, research, and artistic activities under the Universities Act. In Finland, these research assessment exercises (RAE) are not coordinated or conducted nationally, but the universities decide the aims, methods, and data according to their specific needs.
- Results of institutional RAEs have no effect on the core funding from the Ministry. The main focus is on institutional learning and improvement, even if in some cases, they may also inform internal funding distribution.
- In seven out of eight RAEs conducted since 2014, universities used analyses based on JUFO levels to complement Web of Science- or Scopus-based citation analyses (e.g. as background information supporting Expert Panel assessment).
- The national publication data and JUFO levels could also be used to increase the coverage of fields, publication types, and languages in other macro-level analyses (e.g. the “State of Research in Finland” analyses of the Academy of Finland).



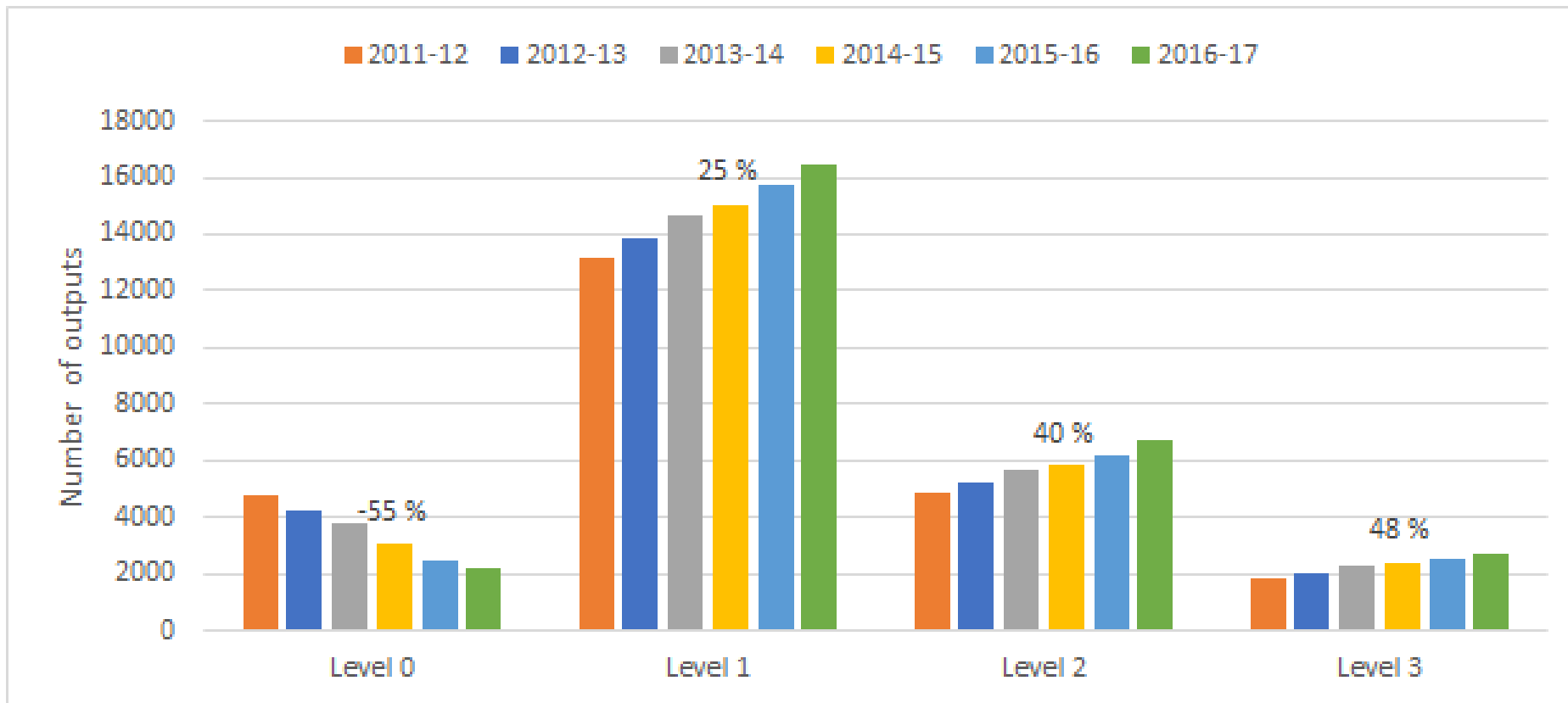


## 5. WHAT KIND OF CHANGES IN PUBLISHING PATTERNS IN FINLAND HAVE COINCIDED WITH THE INTRODUCTION AND ADJUSTMENTS OF JUFO CLASSIFICATIONS?

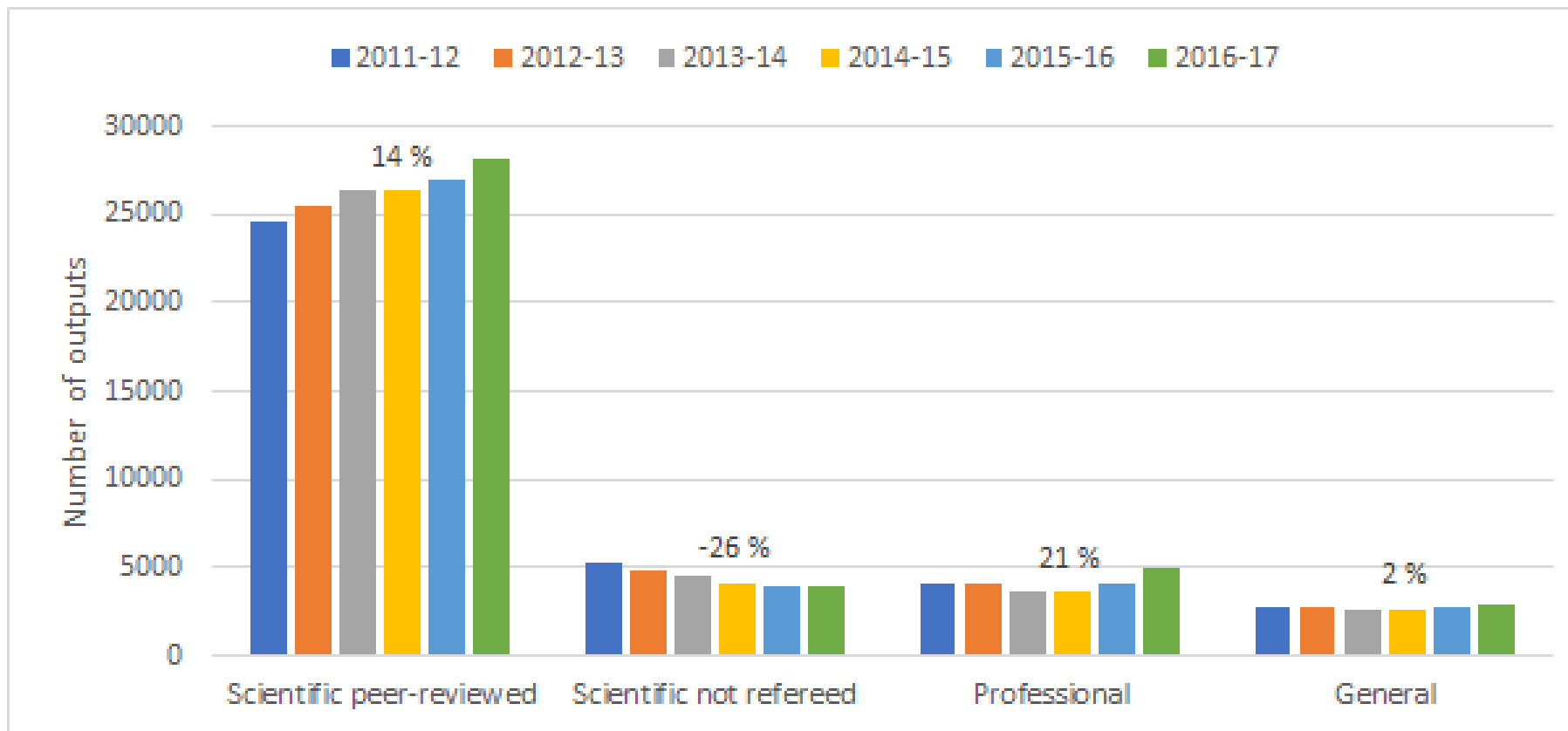
- The first JUFO classification was published in 2012, and it was included among the universities' funding model in 2015.
- Since 2011, peer-reviewed outputs of the Finnish universities have been increasingly published in publication channels of higher JUFO level 2 and 3, and there has been a marked decline of publishing in publication channels on JUFO level 0.
- This development has not taken place at the expense of the diversity of scholarly communication practices, such as publishing in national languages, books and conferences, open access publishing, domestic and international collaboration, or publishing to professional and general audiences.



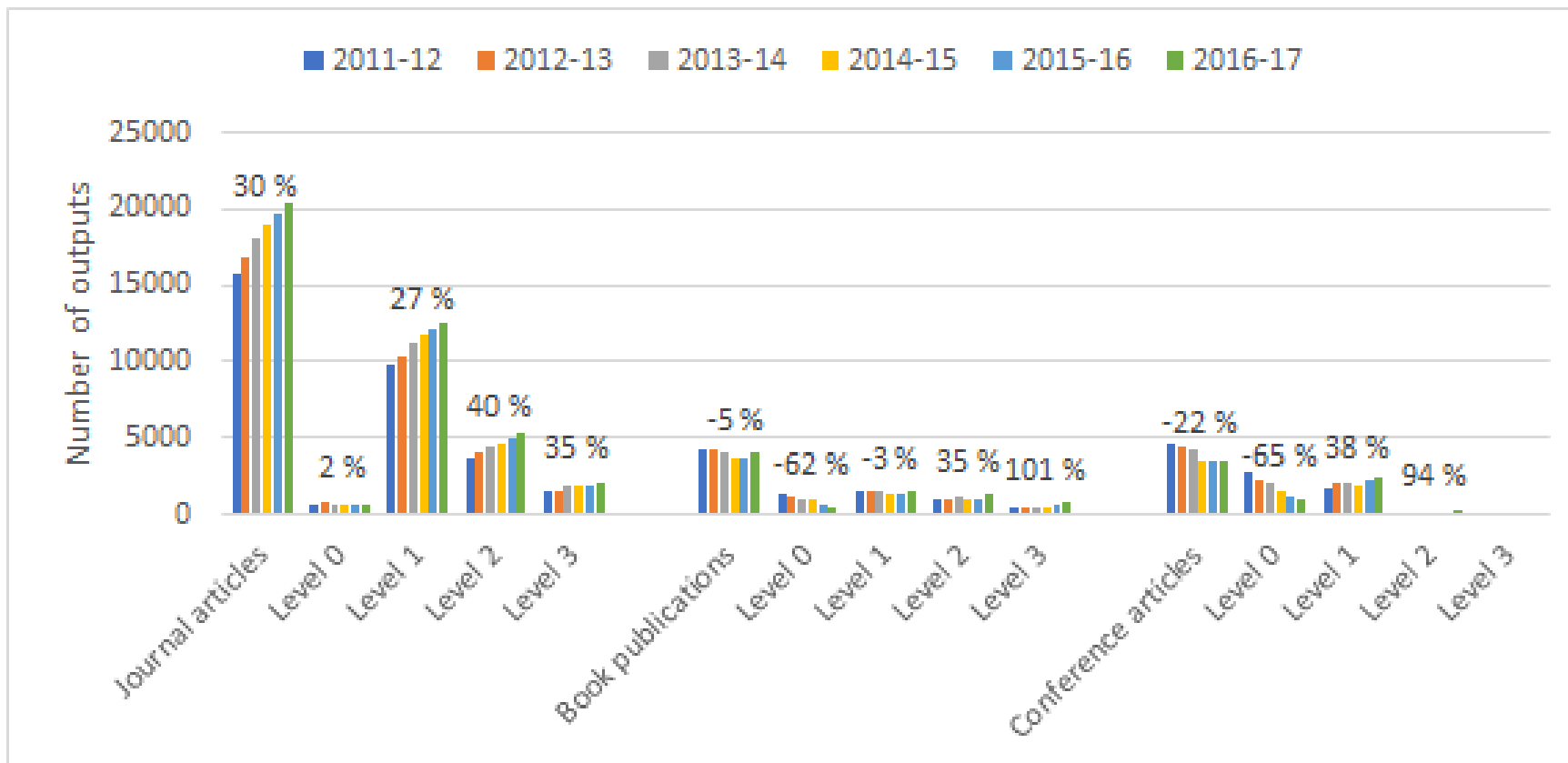
**Figure 6.5. The number of level 0 publication outputs decreased by 55% from 2011 to 2017, while the number of level 1-3 outputs increased significantly (25-48%).**



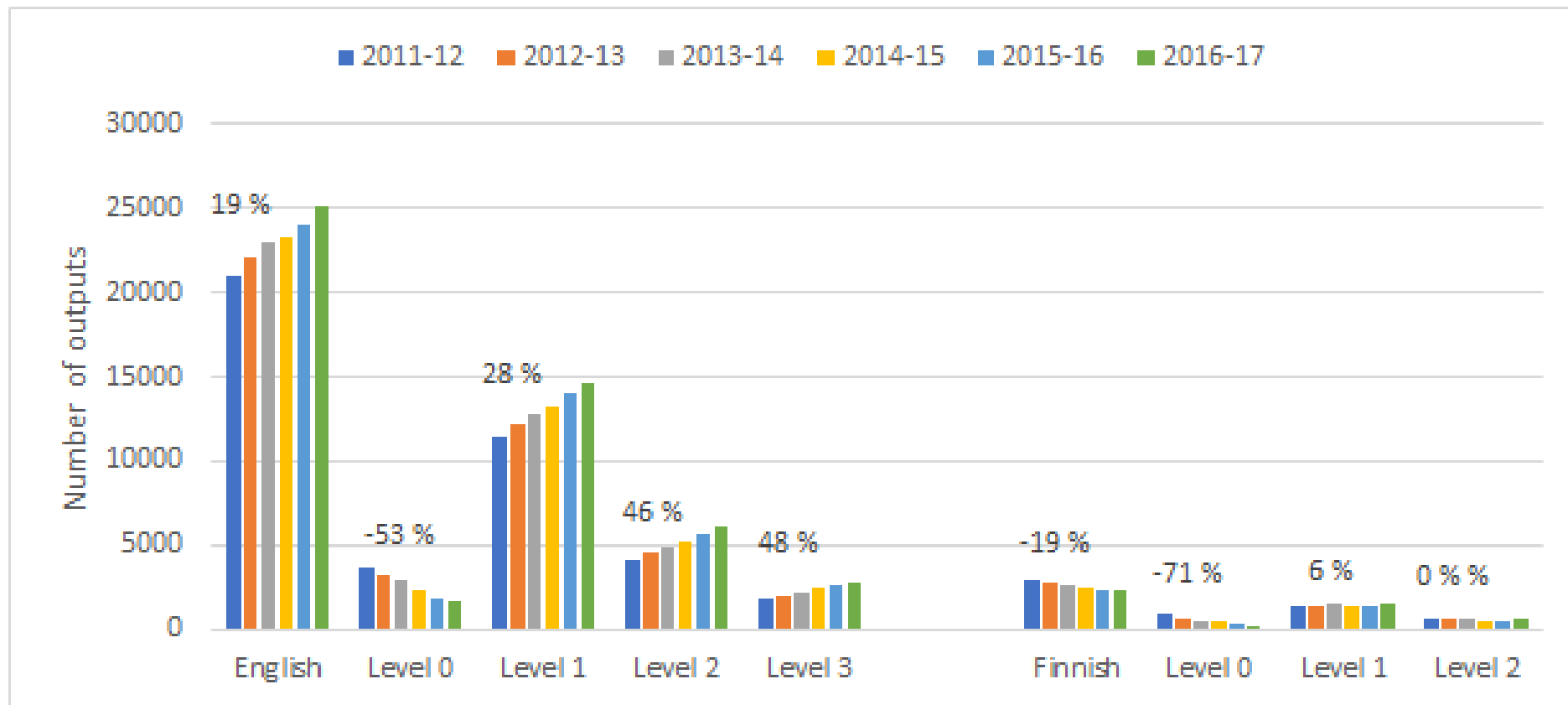
**Figure 6.4. The number of peer-reviewed scientific publications increased by 14% from 2011 to 2017, professional publications increased 21% and the number of publications for general audiences remained constant**



**Figure 6.6. The decrease in book and conference publication outputs from 2011 to 2017 only occurred with books and conferences at JUFO level 0.**



**Figure 6.9. The Finnish-language peer-reviewed publication outputs decreased from 2011 to 2017 only on JUFO level 0.**



# 3. RECOMMENDATIONS AND CONSIDERATIONS

Recommendations: Actions that specified parties should definitely undertake sooner rather than later.

Considerations: Actions that specified parties should take into consideration, evaluate in more detail, and/or weigh options/possibilities on – and decide upon sooner rather than later.



# RECOMMENDATIONS AND CONSIDERATIONS FOR STAKEHOLDERS

## RECOMMENDATIONS

- 1. Research performing and funding organisations should **commit to the *National Recommendations for Good practice in Researcher Evaluation*** (Federation of Finnish Learned Societies, 2020), as well as follow the ***User Guide for the Publication Forum Classification*** (JUFO, 2020) regarding the responsible use of the JUFO levels in different evaluation contexts. The JUFO Steering Group should consult various stakeholders when updating the latter guideline.
- 2. The JUFO secretariat should **establish a systematic annual monitoring of the quality and open access of publication channels** used by the Finnish researchers. This should be done in collaboration with relevant stakeholders, following the national Policy for Open access to Scholarly Publications (Open Science coordination, 2019). The monitoring efforts should focus on the diversity and open access of publication outputs, as well as the use of JUFO levels as a quality indicator. (Requires additional resources for the JUFO secretariat).

## CONSIDERATIONS

- 1. The Ministry of Education and Culture should consider **increasing communication between the (i) Ministry's working group(s)** tasked with the development of the publication performance indicator of the Ministry's funding model, **and (ii) JUFO Steering Group** tasked with the development of the JUFO classification of publication channels.
- 2. The JUFO Steering Group should consider **promoting the use of JUFO classification of publication channels in new macro-level analyses** (e.g., analyses of scholarly publishing at country and institutional levels; institutional research assessments; monitoring related to Research.fi).



# RECOMMENDATIONS AND CONSIDERATIONS REGARDING JUFO LEVELS

## ▪ RECOMMENDATIONS

- **3.** The JUFO Steering Group should **retain the current number of JUFO levels (0, 1, 2, 3)**, intact, as there is no wide consensus about the need to remove level 3 from the JUFO classification.
- **4.** The JUFO Steering Group should **increase the publication volume share of JUFO level 2 and 3 journals/series** to improve the equal treatment of various sub-fields of research.
- **5.** The JUFO Steering Group should include, in JUFO-portal, **more information about the reasons why particular publication channels are assigned to JUFO level 0** (incl. information clearly distinguishing questionable channels from legitimate channels).
- **6.** The JUFO Steering Group should facilitate Expert Panel decision making by **clarifying and prioritising publication channel evaluation criteria**, clearly communicating policy considerations (related to e.g. national languages and open access), and – if required – establishing clearer minimum requirements even for JUFO levels 2 and 3.

## ▪ CONSIDERATIONS

- **3.** The JUFO Steering Group should explore possibilities for **increasing the balance between publication types**, possibly by decreasing the number of book publishers at JUFO levels 2 and 3, or by increasing the publication volume share of JUFO level 2 and 3 journals/series..
- **4.** The JUFO Steering Group should explore possibilities for **using the national publication volume** (in addition to or instead of the world total publication volume) in calculating JUFO level 2 and 3 quotas. The aim would be to balance the JUFO levels between fields and publication types, as well as to **reduce the effect of large publication volumes** on evaluation. At the same time, the possibility for **incremental annual updating of levels 2 and 3** (instead of a large review every four years) should be considered.





# RECOMMENDATIONS AND CONSIDERATIONS REGARDING PANEL WORK

## ▪ RECOMMENDATIONS

- 7. The JUFO Secretariat should **decrease the workload of expert panellists** by improving the information base supporting channel evaluation, taking administrative decisions regarding JUFO levels 0 and 1, and assisting expert assessment with automated rankings (this requires additional resources to the JUFO secretariat: three full-time employees instead of current two).
- 8. The JUFO secretariat should systematise the process of gathering information about **conflicting engagements by expert panellists** and improve the information register about the panellists' memberships of editorial boards of publication channels, as well as their own publications in the channels.
- 9. The JUFO Steering Group should explore possibilities for **using international experts in the JUFO expert panels**, for example, in collaboration with the Nordic countries using national publication channel lists.

## ▪ CONSIDERATIONS

- 5. The JUFO secretariat and Panels should explore possibilities for **increasing communication between the Expert Panels and the research community** (e.g., public discussions organised and facilitated by JUFO in collaboration with learned societies).



# RECOMMENDATIONS AND CONSIDERATIONS REGARDING JUFO PORTAL

## ▪ RECOMMENDATIONS

- **10.** The JUFO secretariat should further **improve the transparency of the expert evaluation** by making all the information supporting the expert evaluations, as well as panels' grounds for level assignments, available in the JUFO portal to members of the research community.
- **11.** The JUFO secretariat should extend JUFO portal services with more **comprehensive open access information for researchers**, including OA publishing options, the benefits provided by FinELib, and research funder requirements (e.g. Plan S).
- **12.** The JUFO secretariat should develop **international infrastructures** (e.g., the Nordic list), collaboration, and research (e.g., identification of questionable journals) to support evaluation of publication channels, as well as to advance responsible assessment culture.

## ▪ CONSIDERATIONS

- **6.** The JUFO secretariat should explore possibilities for **new automated rules, analysis tools, and visualisations to facilitate the work of expert panellists** and allow the research community to compare JUFO levels in specific fields according to all supporting information (e.g., journal metrics and Nordic-level ratings).
- **7.** The Ministry of Education and Culture should consider how to **ensure sufficient resources** to secure the stability and availability of basic operational functionalities of the JUFO portal, as well as the development of the new services for expert panellists and members of the research community.



# 4. QUESTIONS AND DISCUSSION





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