

# Publication Output of Swiss Political Science Departments

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*This article compares the scientific publication output and international academic visibility of Swiss political science departments, using three indicators (number of publications, number of citations, and the h-index) and publicly available data from two sources: the ISI Web of Knowledge and Google Scholar. We also examine whether the publication output of political science professors and postdoctoral researchers in Switzerland varies as a function of academic age. We observe rather strong variations both across and within departments. The analysis also shows that the most prolific professors tend to be those who completed their Ph.D. about 10–20 years ago and that some postdocs are on a very promising publications trajectory. We derive some benchmarks for publication output that might be useful for hiring decisions or promotions.*

KEYWORDS: Publication Output • Swiss Political Science • Bibliometric Analysis

## Introduction<sup>1</sup>

Debates on how to measure the academic performance of individual scientists and the institutions in which they operate are usually heated and inconclusive because there is no consensus on what criteria should be used for such assessments. Scholars also contest how much weight should be given to specific performance indicators when trying to aggregate various performance measures into overall scores (see, for example, a recent debate in the *Political Studies Review*: McLean et al. 2009; Johnston 2009; Russell 2009; Weale 2009; Butler and McAllister 2009; Donovan 2009). Relevant criteria include student satisfaction, third party funding, visibility

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of research results in the mass media, awards, and, last but not least, scientific publications.

Each academic institution must and will, of course, determine on its own on what accounts it wishes to excel. We submit, however, that reliable data on performance with respect to specific criteria is useful. In this article we concentrate on one particular type of performance measurement, namely publication output. The international visibility of research output has in the past few years become one of the most important benchmarks in attempts to measure academic performance (see, e.g., Hix 2004; Plümper and Radaelli 2004; Benoit and Marsh 2009), and studies show that it has a significant effect on academic careers (Plümper and Schimmelfennig 2007).

We measure and compare the publication activity and international academic visibility of Swiss political science departments. Our goal is to offer, for the first time, an overview of political science research output in Switzerland and to spur a debate on the direction Swiss political science could or should take in this respect. In other words, our intention is to contribute to the ongoing discussion about whether and how the publication output of political science departments in Switzerland should be compared and what conclusions could or should be drawn from such comparisons.

## **Data and Methods**

Our dataset covers nine institutions in Switzerland that can be described as political science departments. These departments are located at (in alphabetical order) ETH Zurich (Swiss Federal Institute of Technology Zurich), the Graduate Institute of International Studies and Development (IHEID, Geneva), the Graduate Institute of Public Administration (IDHEAP, Lausanne), the University of Bern, the University of Geneva, the University of Lausanne, the University of Lucerne, the University of St. Gallen, and the University of Zurich.

Because institutional structures differ greatly – not all political scientists are based in political science departments, political science departments in some cases include non-political scientists, and institutions carry various labels – we had to adopt some simple sampling rules. We focus on university-based research and teaching units that include two or more political scientists at the professorial level. If non-political scientists are based in those entities, we include them in our sample if their professor-

ships are formally labeled as political science professorships and/or if their teaching activity focuses on political science studies programs. Because of this heterogeneous institutional landscape, which also produces strong heterogeneity in how authors indicate institutional affiliations, a simple search for publication output by political science unit or department would produce data of highly dubious quality. We thus restrict the dataset to regular faculty members at the rank of assistant professor to full professor. In a separate analysis, we also examine publication output by postdocs, defined as scholars with a Ph.D., employed at least half time by a political science department, but without a position as professor. We consider primarily those post-doctoral researchers who completed their Ph.D. within the past ten years, but we also report data for the other postdocs.<sup>2</sup> A few postdocs for whom we could not find the date of completion of the Ph.D. were excluded. The lists of professors (N = 50) and postdocs (N = 40 + 8) included in our analysis can be found in the appendix. Professors and postdocs were identified via the webpages of the respective institution, and if necessary the information was cross-checked with the secretariats of the corresponding institution. Because our focus is not on the publication output of departments within specific time-frames, but rather on the performance of the professors and postdocs based at those institutions, we assume that the publication record travels with the professor or postdoc. That is, if a professor or postdoc is now based, say, at the University of Lausanne, we count all his/her publications, no matter where these publications were produced in the course of her/his career. This sampling approach implies that our results are not commensurable with (but more accurate than) some international comparisons that rely on data retrieved through searches for political science units per se. Hence, we refrain from any comparisons of our results with results for other countries.

To measure the scientific publication activity of professors and compare publication output of political science units, we use two sources of bibliometric data: the ISI Web of Knowledge (which includes the Social Science Citation Index (SSCI) and other ISI databases) and Google Scholar. The analysis of publication activity by postdocs is restricted to ISI-listed publications. The data for publications by professors was collected between 2

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<sup>2</sup> We chose this temporal restriction because we are primarily interested in the so-called *Nachwuchs* or *relève*, and we think that ten years after the Ph.D. a researcher no longer belongs to this category.

November 2009 and 7 November 2009, the data for postdocs between 25 November and 30 November 2009.

The ISI Web of Knowledge includes only those publications that have appeared in ISI-listed, peer-reviewed scientific journals.<sup>3</sup> At the time of our data collection, the ISI datasets included approximately 2'100 journals from around 50 social sciences disciplines, as well as thousands of journals from other scientific fields.<sup>4</sup> We searched for publications by the respective professor in all categories and all years and included articles in the dataset (excluding book reviews, corrections, editorials, and other contributions that were not articles to ISI-listed journals).<sup>5</sup>

Because the publication process in political science tends to be very slow, particularly in comparison with the natural sciences (it sometimes takes up to two years for an accepted article to be formally published, particularly in the highly-ranked journals), we also used the CVs of postdocs, rather than the ISI Web of Knowledge alone, to construct the dataset for the latter. ISI publications of postdocs were included in the dataset also if they had been accepted by the respective journal but had not yet been published.

Google Scholar includes also monographs, contributions to conferences, articles in edited volumes and handbooks, and other types of publications, including publications in languages other than English. We used this second source because of frequently voiced criticism that the ISI data tends to discriminate against scientists who publish more books than journal articles and/or who write in a language other than English. We agree with this criticism and think that it is very important to rely not only on the ISI data. We retrieved the data from Google Scholar using the "Publish-or-Perish" software.<sup>6</sup>

As to the publication activity of professors, we collected and compared data for three indicators: the number of publications, the number of cita-

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<sup>3</sup> The conditions for inclusion of a journal in the ISI datasets are basic standards for peer review and an international editorial board.

<sup>4</sup> For further information, see Online: <http://www.isiwebofknowledge.com> [accessed: 26.04.2010].

<sup>5</sup> Because we are interested in the scientific publication activity of Swiss political scientists, rather than the international visibility of Swiss political scientists in the political science community more narrowly defined, we did not limit our search to political science journals but also took into account publications in other scientific journals.

<sup>6</sup> Online: <http://www.harzing.com/pop.htm> [accessed: 26.04.2010].

Table 1: Regressions of Google Scholar indicators on ISI indicators (OLS estimates with standard errors in parentheses)

	Google Scholar		
	Number of publications	Number of citations	Number of $h$ -index
ISI	6.0 (0.7)	7.9 (0.8)	2.1 (0.2)
Intercept	24.4 (7.0)	157.1 (69.3)	3.5 (0.7)
R <sup>2</sup>	0.60	0.68	0.70
N	50	50	50

tions, and the so-called  $h$ -index.<sup>7</sup> Our two data sources use very different criteria for what counts as a publication. This also implies that citations and the  $h$  index are calculated on an entirely different basis. The  $h$ -index, which uses a definition that is less straightforward than the other two indices, measures how many of a given scientist's publications out of his/her total publications ( $N$ ) have at least  $h$  citations, whereas his/her other publications ( $N - h$ ) have less than  $h$  citations (Hirsch 2005). For instance, an  $h$ -index of 5 means that a scholar has five publications that have been cited at least five times each. However, some of these articles may have been cited more than five times, and the scholar may have published many more articles that have been cited fewer than five times. Thus, the  $h$ -index "punishes" authors who score a large number of citations with few publications or publish a lot but attract few citations per publication. Conversely, it rewards scholars who consistently publish frequently cited works. For postdocs, we restricted the analysis to the number of publications in ISI-

<sup>7</sup> We do not consider the impact factor of publications directly for professors. The construction of an indicator weighing the number of publications by the impact factor of the journal where they appeared is highly problematic because we would need to retrieve the impact factor of every journal for every year in which an article was published by at least one of the professors in our dataset. This would be extremely time-consuming for the ISI data and impossible for the Google Scholar scores. Moreover, it can be argued that the citations that articles actually receive are a better measure than the impact factor of the journal, which averages all articles.

listed journals. We did not examine the number of citations (and, therefore, also not the  $h$ -index) because academic age has a considerable effect on the number of citations. This effect would disadvantage younger postdocs.

The correlation between ISI and Google Scholar indicators is statistically significant and substantively strong. The regression results for publications by professors, displayed in Table 1, show that one more ISI-listed publication is associated with about six more Google Scholar publications; one more ISI citation is associated with about eight more Google Scholar citations; and one more point on the ISI-based  $h$ -index is associated with about two more points in the Google Scholar-based  $h$ -index. The scores based on the two data sources may differ quite strongly for some individual researchers (perhaps if someone publishes largely in the form of books, and in French, Italian, or German). However, as long as we are interested in comparing entire departments, rather than comparing individual researchers across Switzerland irrespective of their institutional base, it does not seem to matter much whether we use one or the other data source. However, we still present results based on both data sources.

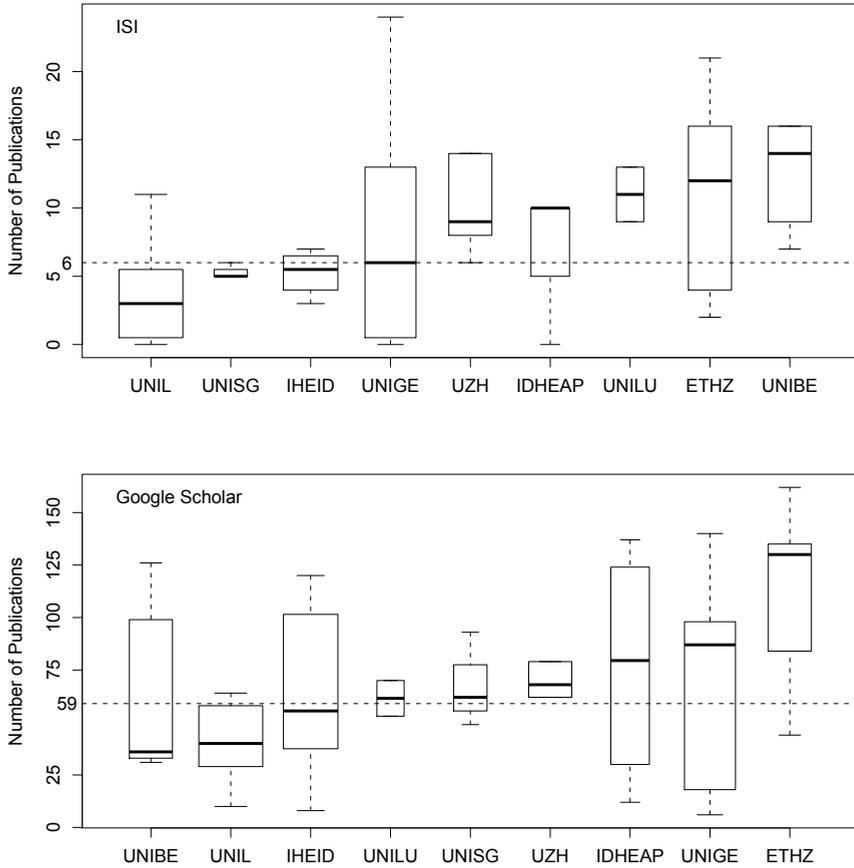
Finally, bibliometric information of the kind we use here is obviously open to questioning. This applies in particular to the second indicator we use (number of citations). As shown in a recent study (Fowler and Asknes 2007), self-citation not only increases the number of citations mechanically, but it also affects how many citations the respective author receives from others. Furthermore, the citation process is not necessarily neutral; it can amplify dubious research results and understate solid ones (Greenberg 2009). Starbuck (2005) also questions the reliability of citation-related measures. However, with these caveats in mind, we believe that the number and impact of publications is an important indicator of the international visibility of research activity.

## Results

### *Departments*

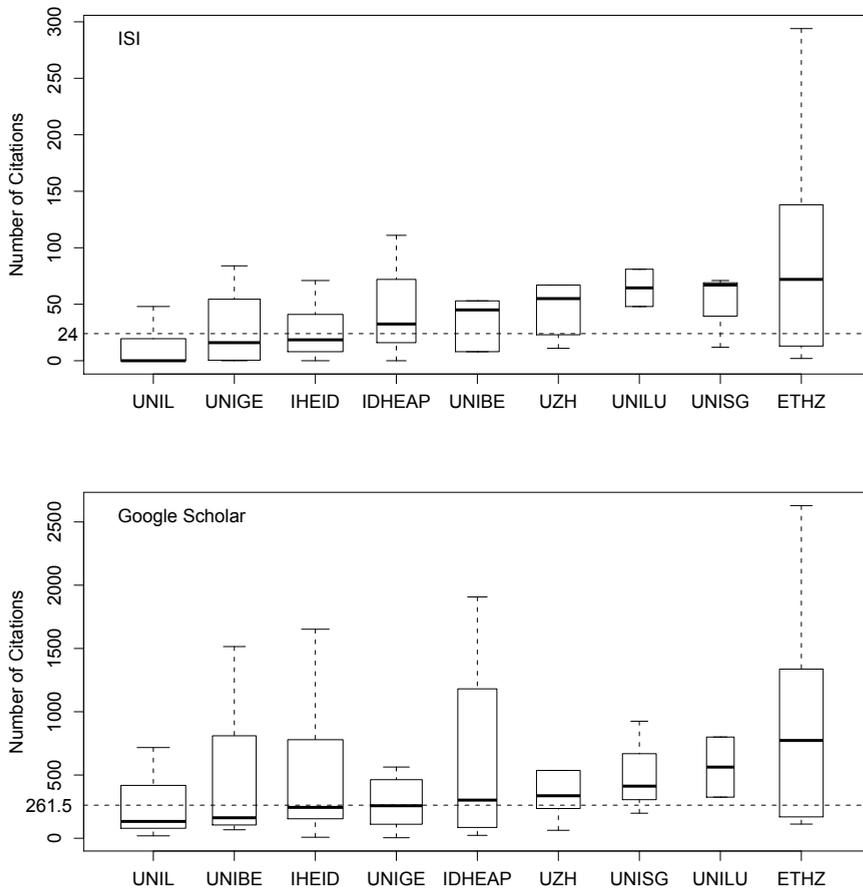
Figures 1–3 show the distribution of the number of publications, the number of citations, and the  $h$ -index for professors at each of the nine institutions included in our sample, using both ISI and Google Scholar data. The boxes, of width that is proportional to the number of professors in the respec-

Figure 1: Distribution of the Number of ISI and Google Scholar Publications by Department



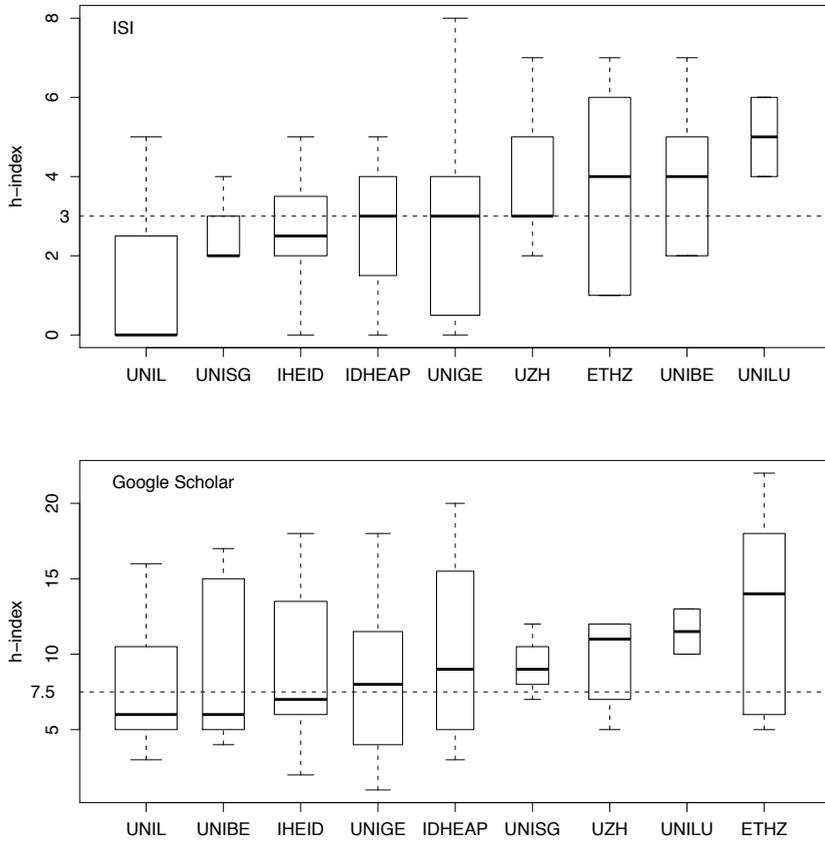
*Notes:* The width of the boxes is proportional to the number of professors in a department. The solid line within each box indicates the median value; boxes and whiskers extend, respectively, from the 25th to the 75th percentile and from the minimum to the maximum. The dashed horizontal line indicates the median value for all professors in Swiss political science units. Outliers are not shown but were taken into account in all calculations.

Figure 2: Distribution of the Number of ISI and Google Scholar Citations by Department



*Notes:* The width of the boxes is proportional to the number of professors in a department. The solid line within each box indicates the median value; boxes and whiskers extend, respectively, from the 25th to the 75th percentile and from the minimum to the maximum. The dashed horizontal line indicates the median value for all professors in Swiss political science units. Outliers are not shown but were taken into account in all calculations.

Figure 3: Distribution of the ISI and Google Scholar h-index by Department



*Notes:* The width of the boxes is proportional to the number of professors in a department. The solid line within each box indicates the median value; boxes and whiskers extend, respectively, from the 25th to the 75th percentile and from the minimum to the maximum. The dashed horizontal line indicates the median value for all professors in Swiss political science units. Outliers are not shown but were taken into account in all calculations.

tive department, extend from the 25th to the 75th percentile. The bold line within the box indicates the median. The short horizontal lines at the end of each dotted vertical line connected to the respective box show the minimum and maximum values unless they are outliers. Outliers are taken into account in all calculations, but they are not displayed to improve the readability of the figures.<sup>8</sup> The dashed, horizontal line that extends through the graph shows the median for all professors in our sample. The institutions are sorted according to their median publication output.

While the positions of the nine political science units change to some extent, depending on the data source used and on the specific indicator, the overall picture is fairly consistent. While the University of Lausanne, IDHEAP and IHEID tend to appear primarily on the left-hand side of the figures, the Universities of Zurich, Lucerne, and ETH Zurich are located primarily on the right-hand side. At the same time, there is also significant variation within departments, which means that professors with stronger publication outputs are not grouped in a single institution or even a few institutions.<sup>9</sup>

#### *Academic Age and Publication Output of Professors*

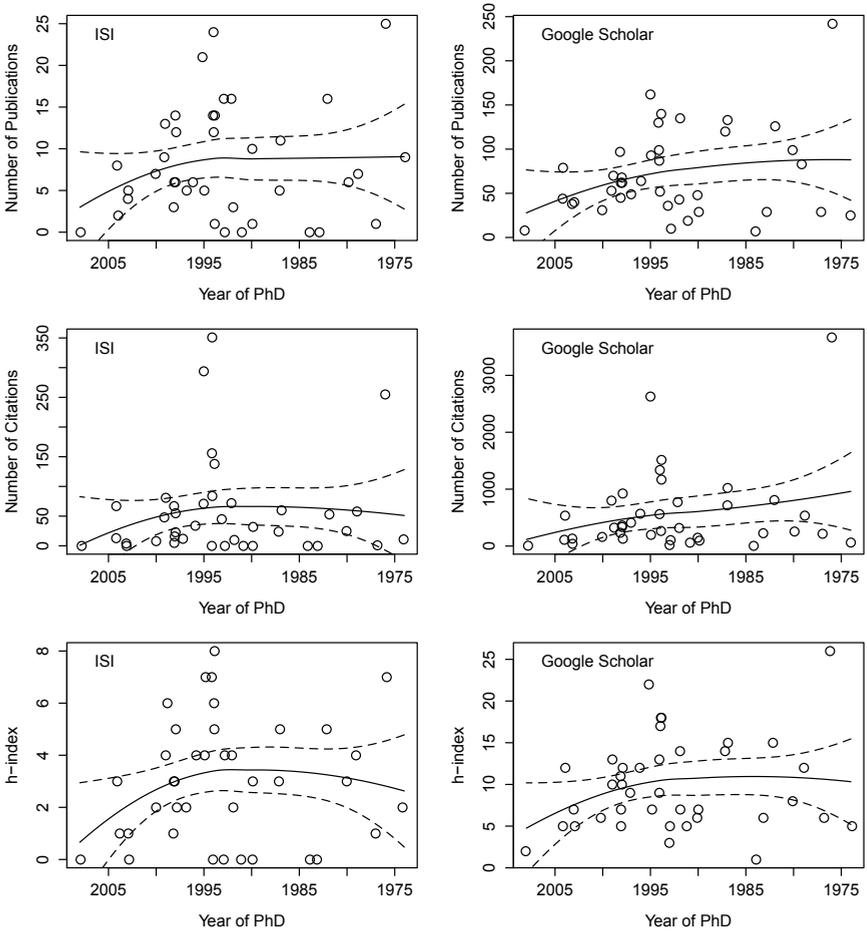
We also collected information on when the professors in our sample received their Ph.D. degrees. The information on the dates of Ph.D. degrees of professors is unfortunately quite incomplete ( $N = 39$  out of 50 for which we collected the information presented above). Hence, we should be cautious in drawing strong conclusions. However, professors for whom we could not identify the year when they completed their Ph.D. score lower on our ISI and Google Scholar indicators. To the extent that these professors are older, which arguably is a reasonable assumption, our findings tend to overestimate the average output for those in older age groups.

Figure 4 suggests a non-linear relationship between academic age and publication performance for some output measures. While the publication output of young scholars is, for obvious reasons, still rather small, scholars in the middle of their academic career (around 10–20 years after receiving

<sup>8</sup> Outliers are defined as observations whose distance from the interquartile range (the length of the boxes in the graphs) is at least 1.5 times the interquartile range.

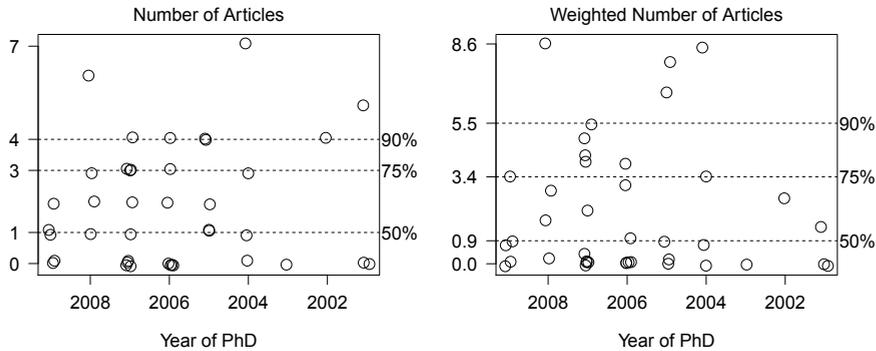
<sup>9</sup> We do not present the publication output of postdocs per political science unit, but only individually (see below) because of the very uneven distribution of postdocs across political science units (e.g., IHEID has no postdocs).

Figure 4: Academic Age and Publication Output of 39 Professors, with Nonparametric Regression Lines and 90% Confidence Intervals



their Ph.D.) score somewhat higher than those who completed their Ph.D. degree 25 or more years ago. The available data thus suggests a rather rapid increase of publication output after completion of the Ph.D., as well as the presence of cohort effects. These trends also suggest that the generation of political scientists around the academic age of 10–20 has adapted

Figure 5: Academic Age and Publication Output of 40 Postdocs who obtained their Ph.D. in 2000 or later



Notes: Dotted lines indicate the 50th, 75th, and 90th percentiles of the distributions. The graph on the right-hand side weighs the number of articles by the impact factor of the journal in which they were published.

quite well to the stronger emphasis on publications that has characterized most Swiss universities for the past decade.

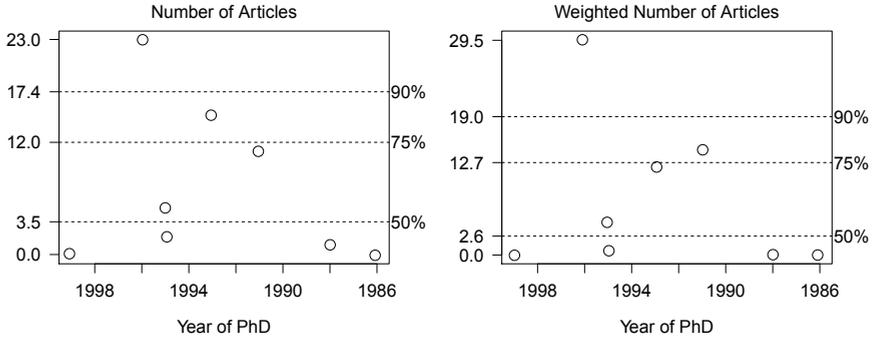
#### *Academic Age and Publication Output of Postdocs*

Figure 5 illustrates how academic age is correlated with the publication activity of postdocs, focusing only on ISI-listed publications. As noted above, we are interested primarily in postdocs who completed their Ph.D. within the past 10 years, who constitute the population of young scientists from which future professors will be recruited (*Nachwuchs* in German, *relève* in French). The discussion below considers only this category, but we also report data for postdocs who completed the Ph.D. more than ten years ago in Figure 6. The left panel of both figures shows the absolute number of publications, while the right panel shows the number of publications weighted by the impact factors of journals.<sup>10</sup> The two measures are highly correlated: postdocs who publish more articles tend to publish in journals with a higher impact factor.<sup>11</sup>

<sup>10</sup> Our measure for the impact factor is not entirely accurate because we use only the 2008 scores, but most articles published by postdocs are recent, and impact factors are relatively stable over time.

<sup>11</sup> Weighted number of articles =  $-0.14 (0.30) + 1.16 (0.12) \times$  number of articles (OLS estimates, standard errors in parentheses,  $N = 40$ ,  $R^2 = 0.73$ ).

Figure 6: Academic Age and Publication Output for 8 Postdocs who obtained the Ph.D. before 2000



Notes: Dotted lines indicate the 50th, 75th, and 90th percentiles of the distributions. The graph on the right-hand side weighs the number of articles by the impact factor of the journal in which they were published.

Three observations are particularly noteworthy. First, there is no statistically significant relationship between academic age and the publication output of postdocs. This could be due to the fact that postdocs with stronger publication records are more likely to become professors and exit our dataset for postdocs sooner. This effect is quite likely because our sample includes postdocs with an academic age of up to 10 years. This probably reduces the average publication output of older postdocs. Second, when comparing the distance between the lines showing the different percentiles, we can see that the distribution is more skewed towards fewer publications when the number of articles is weighted by the impact factors of journals. This means that the publication output of postdocs is less homogeneous once the quality of journals is taken into account. Finally, there are some very strong performers among the postdocs who obtained their Ph.D. within the past five years. The top 10% among postdocs are, in fact, on par with the median Swiss professor who completed her/his Ph.D. within the past ten years. This bodes well for the next generation of political science professors in Switzerland.

The data on postdocs and their publication activity also sheds some light on efforts by Swiss political science departments to promote young scientists. Our data shows that postdoctoral research activity, as visible through the number of postdocs and their ISI-listed publications, tends to be clustered in Zurich: 37.5% of the postdocs who obtained their Ph.D.

Table 2: Summary of Publication Output

	ISI			Google Scholar		
	Number of pub.	Number of cit.	<i>h</i> -index	Number of pub.	Number of cit.	<i>h</i> -index
Median prof.	6.0	24.0	3.0	59.0	261.5	7.5
75th pctile prof.	11.8	65.3	4.0	99.0	759.0	13.0
Max prof.	25.0	351.0	8.0	242.0	3668.0	26.0
Median prof. in top dept.	14.0	72.0	5.0	130.0	773.0	14.0
Median prof. if Ph.D. < 10 yrs	4.0	4.0	1.0	40.0	112.0	5.0
75th pctile prof. if Ph.D. < 10 yrs	5.0	13.0	1.0	44.0	133.0	7.0
Median postdoc if Ph.D. < 10 yrs	1.0	-	-	-	-	-
90th pctile postdoc if Ph.D. < 10 yrs	4.0	-	-	-	-	-
Max postdoc if Ph.D. < 10 yrs	7.0	-	-	-	-	-

within the past ten years are currently located at ETH Zurich or the University of Zurich, and their publication output tends to be higher, especially if the impact factor of journals is taken into account.<sup>12</sup>

## Conclusion

The overall picture that emerges from this data is that there are rather strong differences between Swiss political science units in terms of how internationally visible their research output is. It will be interesting to see how the relative position of Swiss political science units develops over time. Because, under our sampling rules, the publication output travels with the professor and postdoc and because some political science units are small (e.g., the University of Lucerne with two professors, and the University of St. Gallen with three), significant changes from year to year are quite likely.

<sup>12</sup> Number of articles = 1.08(0.68) + 0.75(0.62) × Zurich + 0.12(0.14) × Years since Ph.D.; Weighted number of articles = 1.28(0.89) + 1.91(0.80) × Zurich - 0.00(0.18) × Years since Ph.D. (OLS estimates, standard errors in parentheses, N = 40).

Finally, even though we are fully aware that hiring or promotion decisions must take into account a wide range of criteria, we submit that publication output should play an important role as well. Table 2 summarizes some important pieces of information that may serve as benchmarks.

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## **Appendix**

### **A List of Political Science Units, Professors, and Postdocs**

Our publications data covers assistant professors, associate professors, and full professors as well as postdocs. We define postdocs as scholars with a Ph.D., employed by a political science department, but without a position as professor. We exclude retired (emeritus) professors, adjunct professors, and other staff that is not defined as a regular faculty member or postdoc (e.g., Titularprofessor/professeur titulaire, even if these persons have regular employment in the respective political science unit).

University	Title: Professors	Position
University of Lucerne (UNILU)	Blatter, Joachim	Professor
	Lavenex, Sandra	Associate professor
University of St. Gallen (UNISG)	Caramani, Daniele	Professor
	Davis, James W.	Professor
	Lehmkuhl, Dirk	Professor
IDHEAP Lausanne	Bonoli, Giuliano	Professor
	Horber-Papazian, Katia	Professor
	Knoepfel, Peter	Professor
	Ladner, Andreas	Professor
University of Bern (UNIBE)	Armingeon, Klaus	Professor
	Sager, Fritz	Assistant professor
	Steenbergen, Marco	Professor
	Trampusch, Christine	Assistant professor
	Vatter, Adrian	Professor
ETH Zurich (ETHZ)	Bailer, Stefanie	Assistant professor
	Bernauer, Thomas	Professor
	Cederman, Lars-Erik	Professor
	Schimmelfennig, Frank	Professor
	Wenger, Andreas	Professor
University of Zurich (UZH)	Gilardi, Fabrizio	Associate professor
	Kriesi, Hanspeter	Professor
	Kübler, Daniel	Associate professor
	Michaelowa, Katharina	Associate professor
	Ruloff, Dieter	Professor
University of Geneva (UNIGE)	Allan, Pierre	Professor
	Ballmer-Cao, Thanh-Huyen	Professor
	Baudoui, Rémi	Professor
	Horber, Eugène	Professor
	Hug, Simon	Professor
	Sciarini, Pascal	Professor
	Varone, Frédéric	Professor
IHEID Geneva	Andonova, Liliana	Professor
	Biersteker, Thomas	Professor
	Dupont, Cedric	Professor
	Hoffmann, Stephanie	Assistant professor
	Krause, Keith	Professor
	Luterbacher, Urs	Professor
	Pruegl, Elisabeth	Professor
	Sylvan, David	Professor
University of Lausanne (UNIL)	Bennani-Chraïbi, Mounia	Associate professor
	Braun, Dietmar	Professor
	Fillieule, Olivier	Professor
	Fontana, Biancamaria	Professor
	Giauque, David	Assistant professor
	Graz, Jean-Christophe	Professor
	Leresche, Jean-Philippe	Associate professor
	Papadopoulos, Ioannis	Professor
	Passy, Florence	Associate professor
	Pflieger, Géraldine	Assistant professor
	Voutat, Bernard	Associate professor

University	Title: Postdocs	Ph.D. 2000 or later
ETH Zurich (ETHZ)	Bechtel, Michael	Yes
	Dunn Caveltly, Myriam	Yes
	Koubi, Vally	No
	Leuffen, Dirk	Yes
	Ruoff, Gabriele	Yes
	Schwellnus, Guido	Yes
	Warren, Camber	Yes
	Wilner, Alexandre	Yes
University of Bern (UNIBE)	Baechtiger, André	Yes
	Beyeler, Michelle	Yes
	Milic, Thomas	Yes
	Schwarz, Daniel	Yes
	Stadelmann-Steffen, Isabelle	Yes
University of Geneva (UNIGE)	Gianni, Matteo	No
	Giugni, Marco	No
	Guillaume, Xavier	Yes
	Hedjazi, Alexandre	Yes
	Nicolet, Sarah	Yes
	Raess, Damien	Yes
	Schwok, René	No
	Tavaglione, Nicolas	Yes
Tresch, Anke	Yes	
University of Lausanne (UNIL)	Ariffin, Yohan	Yes
	Avanza, Martina	Yes
	Baume, Sandrine	Yes
	Boisseaux, Stéphane	Yes
	Djaziri, Moncef	No
	Gottraux, Philippe	No
	Hartmann, Eva Barbara	Yes
	Mach, André	Yes
	Marquis, Lionel	Yes
	Péchu, Cécile	Yes
University of Lucerne (UNILU)	Kunz, Rahel	Yes
	Schlenker, Andrea	Yes
	Vanderheiden, Nico	Yes
University of St. Gallen (UNISG)	Habegger, Beat	Yes
	Weber, Ralph	Yes
	Weiss, Moritz	Yes
University of Zurich (UZH)	Bornschieer, Simon	Yes
	Bruetsch, Christian	Yes
	Buehlmann, Marc	Yes
	Haeusermann, Silja	Yes
	Lachat, Romain	Yes
	Maggetti, Martino	Yes
	Manea, Elham	Yes
	Michaelowa, Axel	No
	Stierli, Markus	Yes
	Widmer, Thomas	No

## **B Frequently Asked Questions**

*Did you take into account the differing importance of journals?*

We did not weigh the number of journal publications by the impact factor of the respective journals. We could do that only for the ISI Web of Science listed publications but not for those listed in Google Scholar. Weighing the publications would thus not allow us to compare the ISI and Google Scholar data. This would be criticized by those assuming that Google Scholar is more favorable to those authors publishing in outlets other than journals (e.g., books) and in languages other than English. However, articles in higher ranked ISI journals tend to attract more citations. The number of citations, our second indicator, thus takes into account that journals differ in their impact factor. The same holds true for Google Scholar-listed output.

*Did you take into account the number of authors of a publication?*

We did not weigh our three indicators by the number of authors/co-authors. Such weighing could introduce uncontrollable biases. For example, counting one journal article co-authored by Miller and Meier as one half of an article for each assumes that each author contributed 50% to that article. We could not automatically make that assumption. For this and other reasons, studies of a similar nature use the same approach as we do. Additionally, discounting co-authored articles would punish authors who prefer to work in teams.

*Did you take the age of professors and postdocs into account?*

In part. In principle, academic age should have a positive effect on our three indicators: more senior researchers have had more time to publish and attract citations. In reality, the relationship is non-linear and, overall, rather weak. However, we compared institutions, most of which include professors of varying academic age, and took academic age into account explicitly when looking at individuals.

*Why is Basel left out?*

The Europa Institute in Basel includes one part-time political science professor. Including this institute would reveal the individual publication performance of this professor and would violate our principle of anonymity. It would also credit all this person's publications to the respective institution, whereas this person's employment is only 75%. All other professors included in our sample are employed full time at the respective institution.

*Why did you leave out political scientists based at institutions other than the nine political science departments?*

There are very few political science professors located in institutions other than the ones we chose to include. We would have had to bring these individuals into the comparison as individuals, which would violate our principle of not naming individual professors in the comparison and comparing institutions rather than individual professors. Moreover, there are some postdocs located outside political science departments (e.g., in the environmental sciences department of ETH Zurich). Again, most of these individuals and their publication scores would not remain anonymous if we included them.

*Are all political science professors and postdocs included in the sample?*

We are quite confident that all full-time political science professors in the nine institutions considered are included in our sample. For postdocs, there is more uncertainty because that population is less stable. We consulted the webpages of all political science institutions and if necessary we contacted their secretariats. Therefore, we think that our count is quite complete. Remember also that we included only postdocs with at least a 50% employment level at the respective institution and for which we were able to identify the age of their Ph.D.

*How did you deal with self-citations?*

Like virtually all other studies of the same nature, we included self-citations as well. If all authors behave similarly with regard to self-citation, there should be no systematic bias in our comparisons.

*Why did not you measure and compare total publication output of departments (e.g., total output by all department staff)?*

Doing so would not take into account that Swiss political science departments vary greatly in size. We think that it is more informative to look at distributions across and within departments, and to distinguish between professors and postdocs.

*Is there a downward bias in the data for postdocs because the highest performing postdocs tend to exit the postdoc sample quickly to become professors?*

Such an effect is possible but difficult to demonstrate.

*Why did not you measure the publication output per department and year or professor/postdoc and year?*

This would have been extremely time-consuming and probably would have generated data of dubious quality. As noted above, the institutional and affiliation nomenclature in the ISI and Google Scholar data is very heterogeneous. We even found researchers who listed different affiliations on the same publication or on different publications in the same year. Hence, we could not simply search by institution and year. Another problem is that in Google Scholar the publication time/date is often absent or inaccurate. Moreover, publication output by an individual is usually unevenly distributed across years. So a one-year snapshot is unlikely to be representative of an individual's performance. Finally, an affiliation given on a publication does not mean that the research was carried out at the respective institution. This is especially the case for postdocs. Hence, we prefer the most simple approach. We measured the accumulated publication output of professors and postdocs that were, on the date of data retrieval, based at a given institution. In other words, our data does not measure how productive any given professor or postdoc was in a given year. Rather, it measures what types of scholars (in terms of their life-long publication record) an institution is able to attract and keep.

*Why are publications in non-political science or non-social sciences journals also included?*

We wanted to measure publication activity by political scientists in academic outlets. There is no reason to discriminate against authors who publish their work in scientific outlets outside the domain of political science. To the contrary, in view of widespread demands for interdisciplinarity, we think that it is very useful if political scientists publish their work also outside their narrowly defined community. Moreover, some journals (e.g., those in Political Economy, International Relations, or Public Administration) are only in part political science journals. Finally, we could implement such a restriction only for the ISI data, but not for Google Scholar.

*Why did not you include political science institutions in other countries for comparison?*

We are, at this stage, primarily interested in an overview of publication output in Switzerland.

*Can I get the data from the authors?*

We are willing to give you the data on your own publication output but will not provide data on the publication output of other persons. However, the sources from which we retrieved our data are public, so you can download the data yourself. Please note that if you download the data from the ISI Web of Science or Google Scholar, there is a high probability that the results will not be identical to the ones we present in our article. In most cases, the scores will be higher because we retrieved our data in November 2009, and the databases we use are continuously updated. If you discover mistakes or omissions in our data, we will address them in a follow-up version. Unless there is a major mistake, we are not able to correct/update data on selected individuals. To maintain a “level-playing-field”, we had to retrieve the data for all persons in our sample within as short a time-span as possible.

*How could the impact factor of journals be taken into account?*

We might do that in a follow-up version, for example, by measuring how many articles professors/postdocs from an institution have published in high-impact ISI-listed journals (e.g., those with an impact factor higher than 1.5 or 2.0), in total and/or weighed by the number of professors/postdocs based at the institution. We could also weigh each publication by the impact factor of the respective journal and sum up these scores, rather than simply counting the number of publications in ISI-listed journals (see also above). However, this approach is not feasible for the Google Scholar data.

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### **L'output en matière de publication des départements de science politique suisses**

Cet article compare l'output scientifique en matière de publication, ainsi que la visibilité internationale des départements de science politique Suisses, à l'aide de trois indicateurs (le nombre de publications, le nombre de citations et l'indice « *h* ») et des données publiquement accessibles sur les deux sites suivants : l'ISI Web of Knowledge et Google Scholar. Nous examinons également si l'output en matière de publications des professeur-e-s de sciences politiques et des post-docs varie en fonction de l'âge académique. Nous observons de fortes variations entre les différents départements ainsi qu'à l'intérieur de ceux-ci. L'analyse démontre aussi que les professeurs les plus prolifiques tendent à être ceux qui ont terminé leur doctorat il y a 10–20 ans, et que la trajectoire en matière de publications de quelques post-docs s'annonce très prometteuse. Nous concluons avec quelques indices de référence qui peuvent être utiles lors de l'évaluation des dossiers de candidature pour des postes académiques et de promotion.

### **Der Publikationsoutput politikwissenschaftlicher Institute in der Schweiz**

Diese Arbeit vergleicht den wissenschaftlichen Publikationsoutput und die internationale akademische Sichtbarkeit von politikwissenschaftlichen Instituten in der Schweiz mittels dreier Indikatoren (Anzahl Publikationen, Anzahl Zitationen, und *h*-index) und öffentlich zugänglicher Daten aus zwei Quellen, dem ISI Web of Knowledge und Google Scholar. Wir untersuchen auch, inwiefern sich der Publikationsoutput von Professorinnen und Professoren und Post-Docs entsprechend dem akademischen Alter verändert. Wir beobachten starke Unterschiede zwischen und innerhalb von Instituten. Unsere Analyse zeigt weiters, dass die profiliertesten Professorinnen und Professoren jene sind, welche ihren Ph.D. vor 10 bis 20 Jahren erworben haben, und dass sich einige Post-Docs, gemessen an ihren Publikationen, auf einem erfolgsversprechenden Weg befinden. Wir leiten einige Benchmarks für den Publikationsoutput her, welche sich für Anstellungsentscheidungen oder Beförderungen als wertvoll erweisen könnten.

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