A robustness check

of the findings in Graber, Launov and Wälde (2008, German Economic Review)

Graber, Launov and Wälde[1]

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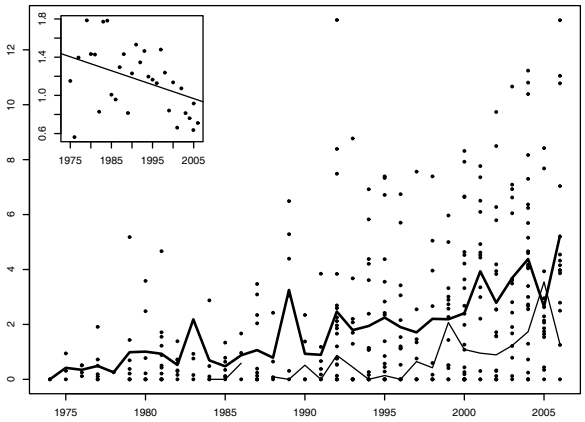
The quality of publications as shown in the right panel of fig. 4 in Graber, Launov and Wälde (2008) is reproduced in the following figure.



This figure builds on 343 observations. As this is only around 50% of the total number of professors, one could be concerned about selection bias. What if only those who publish make information available in public CVs? Is our average of 5.2 standardized EER articles in 2006 too high and therefore our prediction for publication standards in 2011 too high? While we denied this question in the conclusion of our paper, we provide here detailed information on how we did this.

We also ask how strong our result depends on the weighting scheme. What if we do not use the Combes and Linnemer weighting scheme, covering 1110 journals, but a much shorter list with only 100-200 journals (covering only "the best" journals)? This comparison is informative as casual international comparisons with the US and the UK suggest that 5.2 EER articles at tenure is higher than in other countries.

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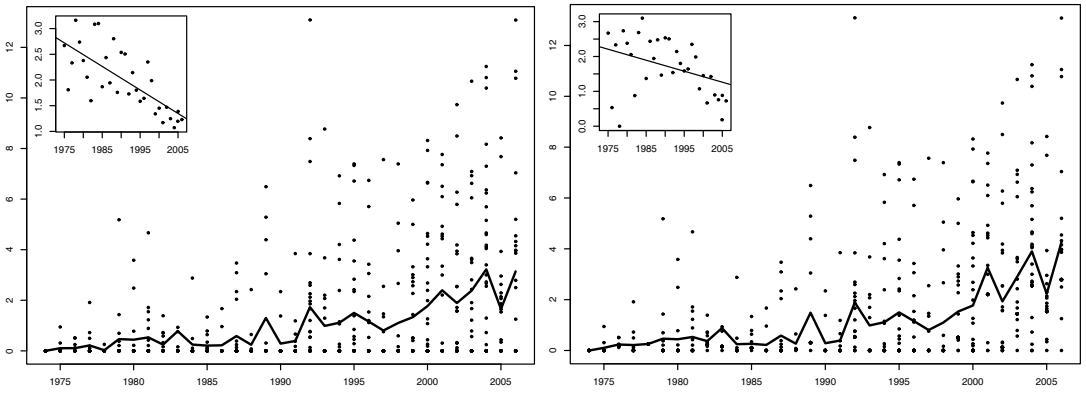
Maybe our relatively high value of 5.2 articles is just the result of quantity and not quality? What if an appointing committee looks at quality only? Here, the reply is a qualified yes: If only quality matters, much fewer publications are required.

1 Are estimates biased upwards?

We performed various robustness checks. The simplest and most extreme one consists in assuming that the remaining 50% of professors, i.e. those for whom not sufficient information is available, have all zero publications at the moment of their appointment. The resulting figure is in the left panel. If we make a less extreme assumption and stipulate that the remaining 50% have as many publications as the 25-percentile in the year of their appointment, we obtain the right panel.

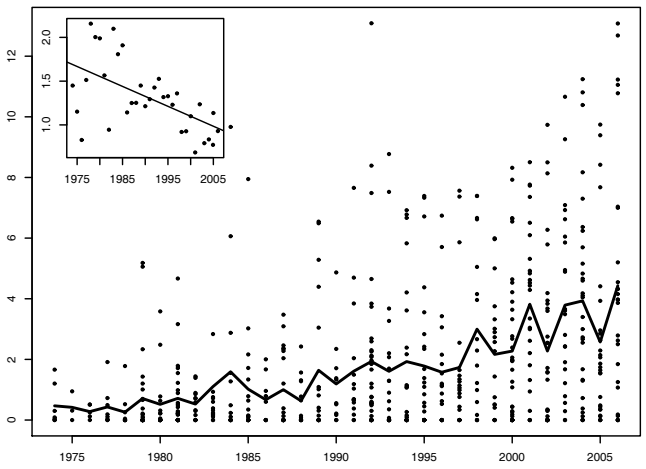


As one can see, the maximum drops from 5.2 to 3.1 in 2006 in the extreme case and to 4.3 in the 25% case. Overall, the quality of publications would be 46% and 38% lower than in the dataset we actually use.

A third robustness check is as follows. We look at the 50% of professors for which we do not have sufficient personal information. For each of them, we compute the total quality adjusted number of publications up to 2006, the last year of our sample. We then divide this by the average academic age in our sample. This means we assume that this group has the same age structure as the group for which we have data. This gives us publications per year since PhD. We then multiply this by 8 as 8 is the average duration between completion of PhD and appointment. This gives us 1.52 as the average EER-standardized number of publications in the year of

appointment of the "unobserved professor" over time. We then spread these equally on the horizontal axis and find that EER-standardized publications decrease by 16%.

If we consider additional information on the date of PhD, we end up with a fourth way to deal with the sample selection bias. Given that the average duration between completion of PhD and appointment is 8 years, we compute the number of standardized EER articles of the "unobserved professor" for this period of time. Thereby we implicitly assume that the "unobserved professor" had their first time appointment 8 years after PhD, so there is no need to spread these observations equally on the horizontal axis. For individuals where we do not have information on the date of PhD, we compute the total quality adjusted number of publications up to 2006 and divide this by the average academic age in our sample. The average EER-standardized number of publications in the year of appointment for this group is computed by multiplying with the average duration between completion of PhD and appointment. Together with our observations from fig 4. we obtain the following figure.



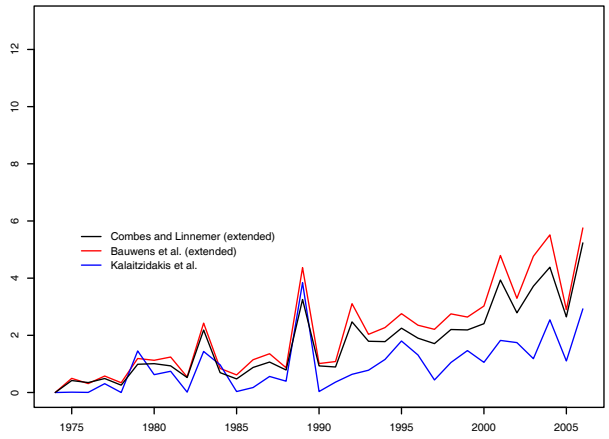
In this case the average number of EER standard articles drops from 5.2 from fig 4 in Graber, Launov and Wälde (2008) in 2006 to 4.4. Overall, the quality of publications would also be 16% lower, just as in the third robustness check.

Summarizing, if we believe that only those who publish a lot make information available, our estimates are upwards biased. If we correct for this in the best possible way, our average of 5.2 standardized EER articles in 2006 drops by 16%, i.e. to 4.4 standardized EER articles in 2006. The prediction for 2011 would therefore also be

lower. If we assume the same percentage, we would expect $.84 * 6 = 5$ standardized EER articles for the average newly appointed professor in 2011.

2 The effect of an alternative weighting scheme

The average quality of publications as shown in the right panel of fig. 4 in Graber, Launov and Wälde (2008) is reproduced in the following figure by using different weighting schemes.



Graber, Launov and Wälde (2008) use an extended weighting scheme of Combes and Linnemer (2003). The weighting scheme of Kalaitzidakis, Mamuneas and Stengos (2003) takes 159 journals into account, while an extended version of Bauwens et al. (2003) weights nearly all EconLit journals. All remaining EconLit publications are set to zero. If we consider these two other weighting schemes, one can see a difference in the average number of standardized EER articles over time. In 2006, the average number of standardized EER articles amounts to 5.2 (extended Combes and Linnemer) and 5.8 (extended Bauwens et al.) respectively, compared to 2.9 (Kalaitzidakis, Mamuneas and Stengos). This is due to the different amounts of journals which the weighting schemes take into account.

If appointing committees look at quality only and are not aware of more than 1000 journals, an average of 2.9 is more realistic. If, however, a committee just adds the number of publications and weighs publications in well-known journals stronger, the average of 5.8 as presented in the original paper is the valid one.