Discussion: Productivity Beliefs and Efficiency in Science (Bertoletti, Myers, and Tham)

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Overview

- Collect data on researchers WTP for more research time or funding via survey.
- Combine this with their individual levels of time allocation, salary, and funding (guaranteed and grant).
- Infer their utility (private return) from research in money terms.
- Key assumptions:
  - Researcher's utility from research corresponds to research output
  - Social value of research is a simple (constant) multiple of researcher's private value
- Use the results to evaluate the benefits of reallocation of research funds and time (within survey sample values).

Results

- Survey results for median scientist:
  - 10 cents of $1 of research funding
  - $68 for an additional hour of research time. This is very large, corresponding to an annual salary of $136,000 at 2000 hours per year, roughly equal to the median salary in the sample.
  - Are they willing to research for free? Probably not. marginal≠average
  - Interesting to compare this number with salary across researchers – Figure A5 shows that they are clearly correlated, WTP about $50 more than hourly wage.
- Biggest gains in social value come from reallocation of research funds to more productive researchers.

Skewness

- Reported 90/10 ratio for researcher belief in productivity across all fields = 12.1
- For comparison, our sample of French physicists:

	CNRS		University	
	Lifetime*	Age 40-50	Lifetime*	Age 40-50
Publications	7.7	12.0	6.4	17.0
Cite-weighted publications	15.0	33.5	14.0	56.5
* Some are truncated at 2022				

Some thoughts

- Static model – over the career, the research output in U_2 will influence the salary M_i as well as time allocation
  - Will this change anything? Reinforces the desire for research time?
- Social value of teaching may affect optimal allocation (Figure 4)
  - Also, why outlier in Figure 5? Research budgets clustered along 45 degree line with one exception
- Suggests joint production of teaching and research inefficient, but ignores any spillover benefits from co-production
- Biggest weakness the assumption of uniform spillovers from research of any kind.
- Will the model be able to say anything about the optimal allocation across fields?

But..

- A very interesting paper and a big step forward in the analysis of research funding and productivity
- Congratulations to the authors!