

Grants and productivity: a personal story with a counter-intuitive message

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<http://www.bmartin.cc/>

22 February 2018

DOES HAVING A RESEARCH GRANT increase your productivity? Everyone seems to think so.

But how much difference does a grant make? Could it double your output, or is the effect more modest? There doesn't seem to be a lot of documented information about this.

A while ago, I realised I could try to measure the effect of research grants on my own productivity. For the period 1986–2009, I held single-investigator grants for about half of the years. So I set up a simple table: for each of those years, I listed my publications, the publications of my collaborators (research assistants or research associates hired by the grant) and whether or not I had a grant — and looked for correlations.

One complication is time delay. It takes a while after research is initiated before articles are published. So I looked at the publications of my collaborators and deduced a two-year delay. Then I looked at my own publications two years following grants. Surprise — there was no apparent correlation between having a grant and my time-lagged publication output. Details are in the table below.¹

This assessment has a lot of limitations. During the years covered, teaching loads dramatically increased, I took on more administrative duties, the Internet changed communication practices and my research skills changed — improved, I hope. Furthermore, I work in the social sciences and don't need funding for equipment. As a statistician will tell you, a correlation between grants and publications doesn't prove causation, and likewise absence of a correlation doesn't

¹ I haven't added figures past 2009. In each year from then until retirement in 2016, I had one semester with no undergraduate teaching due to study leave, long service leave or a half-time appointment. Incidentally, my study leaves in earlier years do not seem correlated with my productivity. That could be because I work on my research much the same year-round.

prove there is no effect. So this examination of grants and productivity doesn't prove very much — but it does raise some questions.

First, why isn't there more attention to productivity improvements due to grants? It seems an obvious thing to study. If grants in a particular field make a big difference compared to another field, there would be a case for favouring the field where money has more impact.

Secondly, how much do apparent increases in a chief investigator's productivity arise from claiming authorship for work of subordinates? If you can hire a team of people and then add your name to the papers arising from their work, there will be an illusion that a grant is aiding your personal productivity.²

Thirdly, if it is actually the case that grants do not increase the chief investigator's outputs, what are the implications? To me, one implication is that it is crucially important to hire productive assistants. In other words, the key to making a grant productive, when the grant is used to hire research assistants or research fellows, is the work done by those hired. I've never received a teaching buy-out from a grant, so I can't comment on the impact of having extra time.

Finally, if we go down the road of looking at outputs per dollar, the implications might be uncomfortable. If you double your salary, it means you should have double the outputs. If you double your research time, for example by teaching buy-outs or having a research-only position, then you should double your outputs. So if you really want a high output-input ratio, look for publications from non-scholarship research students and honorary research fellows.

I've talked to other social science and humanities academics who apply for grants even though they believe their productivity won't change much. Why do they do it? The answer is simple: prestige. Receiving a grant adds to one's status and promotion prospects.

I justified applying for grants by the spin-off benefits to the university, such as more funding for infrastructure and scholarships. It's a perverse system, but there are few rewards for opting out of it, except the simple pleasure of getting on with research.

Thanks to Paula Arvela, Xiaoping Gao and Ken Russell for useful comments.

² Brian Martin, "[Countering supervisor exploitation](#)," *Journal of Scholarly Publishing*, Vol. 45, No. 1, October 2013, pp. 74–86.

Brian Martin: grants and publications, 1986-2009

Column A: yes=ARGC or ARC grant. See <http://www.bmartin.cc/others/ARC/>

Column B: year

Column C: articles by collaborators employed using grants

Column D: books by collaborators employed using grants, multiplied by 5

Column E: book chapters by collaborators employed using grants

Column F: sum of columns C, D and E

Column G: Brian M, articles <http://www.bmartin.cc/pubs/articles.html>

Column H: Brian M, books times 5. <http://www.bmartin.cc/pubs/books.html>

Column I: Brian M, book chapters. <http://www.bmartin.cc/pubs/chapters.html>

Column J: sum of columns G, H and I

Column K: same as column J if a grant held 2 years previously. Otherwise blank

A	B	C	D	E	F	G	H	I	J	K
grant	year	a-coll	b-coll	c-coll	total	a-BM	b-BM	c-BM	total	
	1986				0	4.6		5	9.6	
yes	1987				0	4			4	
yes	1988				0	7.5		1	8.5	
	1989	0.5			0.5	7.5		1	8.5	8.5
	1990	0.5			0.5	3.5			3.5	3.5
	1991				0	2.3	5	1	8.3	
	1992				0	4.2			4.2	
yes	1993				0	3	5		8	
yes	1994				0	4.2			4.2	
yes	1995				0	3.5		1.5	5	5
	1996				0	5.3		3.2	8.5	8.5
	1997				0	1	5		6	6
	1998				0	4	5		9	
yes	1999				0	5	7.5	3	15.5	
yes	2000	1.5			1.5	6.5			6.5	
yes	2001	0.3			0.3	5.2	10		15.2	15.2
	2002				0	3.8		1	4.8	4.8
yes	2003	0.5	2.5		3	6	2.5		8.5	8.5
yes	2004				0	4.5		3.5	8	
yes	2005	0.5			0.5	6		1	7	7
	2006	1.5			1.5	6		2	8	8
	2007	1			1	6	5	2	13	13
	2008	2			2	8.3		1	9.3	
	2009				0	5.5		2	7.5	
	Totals	8.3	2.5	0	10.8	117.4	45	28.2	183.1	88

If grants had had a significant impact on my productivity, then the K-column total would be more than half the J-column total, other things being equal.