

ORIGINAL ANALYSIS COMPARED WITH (X1) OMITTING CERN AND (X2) OMITTING BOTH CERN AND SOUTHAMPTON

--> Fig 4 change of scale for better comparability with Figs 4X1 & 4X2 below left

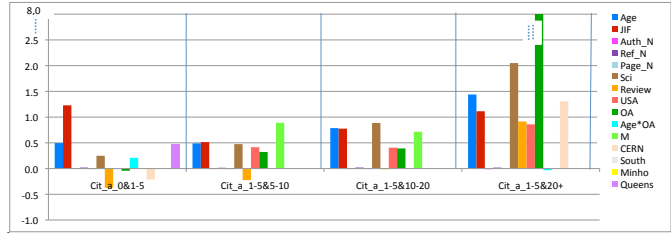
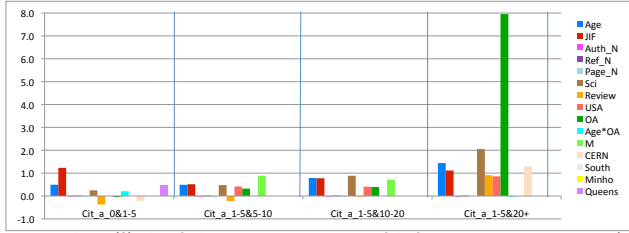


Figure 4: The Exp(B) values for logistic regressions. In most of the four citation range comparisons (zero/low, low/med1, low/med2, low/high) citation counts are positively correlated with Age, Journal Impact Factor, Number of Authors, Number of References, Number of Pages, Science, Review, USA Author, OA, and Mandatedness. There is also an OA\*Age interaction in the top and bottom range. (Citations grow with time; for age-matched articles, the OA Advantage grows even faster with time; Figure 5). OA is a significant independent contributor in every citation range, but especially at the high end.

Figure 4, above left is the same figure as in the paper, but with the deviations plotted relative to 0 as baseline. Positive deviations mean the higher citation count is the more likely one. (Above right is the same figure, but at a scale more comparable to Figures 4X1 and 4X2 lower left.)

Note that the only negative deviations were for (1) review articles (in comparing 0 cites with 1-5 cites and 1-5 cites with 5-10 cites), which probably means that either a review article is good, in which case it is very highly cited (1-5 cites vs. 20+ cites), or it is not good, in which case it is apparently cited less than the average article in the lower citation ranges); (2) for OA, in the lowest citation range (0 cites vs 1-5 cites) which confirms our other data that there is no OA advantage in the lowest citation range, but the OA advantage is there in all the other citation ranges, especially the highest; and (3) for U. Minho, which seems to have a light citation disadvantage in the lowest citation range (0 cites vs. 1-5 cites), but no other; Queensland UT also seems to have a slight citation advantage in that range (but in no other).

The only institution with a substantial citation advantage is CERN. Our analyses separated the effects of all factors, including institution, into independent components, but nevertheless, to test whether CERN was in anyway biasing the overall pattern of outcomes, we re-did the analysis without CERN in Figure 4X1. Comparing the two Figures reveals that the pattern of deviations is the same, and so are the corresponding Tables (3 and #X1).

The same is true if we remove Southampton, the only other institution that could conceivably have biased the pattern of results (Figure 4X2 and Table 3X2). The pattern remains the same.

In particular, the pattern and significance for the OA Advantage is not altered by omitting one or both institutions: There is consistently an OA Advantage, especially in the higher citation range.

(Note that there also seems to be an extra citation advantage for mandated articles in the middle range. If this effect proves reliable, it might be an interaction between OA and mandates, with the mandates potentiating the citations for mid-range articles that would otherwise not have been made OA.)

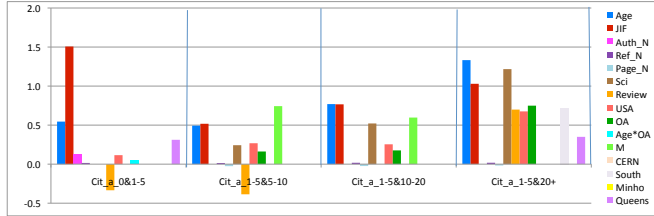


Figure 4X1. Same analysis as Figure 4, minus CERN (i.e., just Southampton, Minho & QUT)

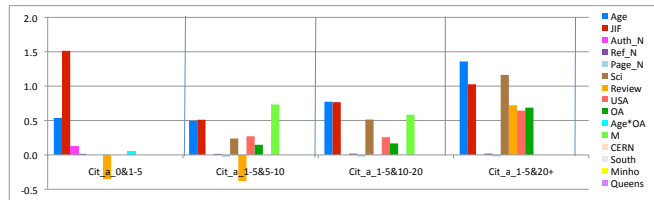


Figure 4X2. Analysis minus CERN and Southampton (i.e. just Minho & QUT)

Table 3: Exp(B) values for logistic regressions (corresponds to Figure 4 from paper)

Model N.	Dependent Var.	Age	JIF	Auth_N	Ref_N	Page_N	Sci	Review	USA	OA	Age*OA	M	CERN	South	Minho	Queens
M 1 (N=19 532)	Cit_a 0&1-5	1.494	2.229	1.007	1.020	0.993	1.249	0.627		0.957	1.209		0.789			1.476
M 2 (N=16 386)	Cit_a 1-5&5-10	1.490	1.514	1.002	1.016	0.986	1.475	0.777	1.415	1.323		1.889				
M 3 (N=15 962)	Cit_a 1-5&10-20	1.786	1.776	1.002	1.020	0.992	1.887	0.992	1.406	1.392		1.716				
M 4 (N=15 050)	Cit_a 1-5&20+	2.439	2.114	0.999	1.019		3.050	1.914	1.860	8.953	0.968		2.306			

Bold: significance < 0.01  
 Italic: significance between 0.01 and 0.05  
 Transformation: Exp(B) - 1

Model N.	Dependent Var.	Age	JIF	Auth_N	Ref_N	Page_N	Sci	Review	USA	OA	Age*OA	M	CERN	South	Minho	Queens
M 1 (N=17 939)	Cit_a 0&1-5	0.494	1.229	0.007	0.020	-0.007	0.249	-0.373		-0.043	0.209		-0.211			0.476
M 2 (N=14 941)	Cit_a 1-5&5-10	0.490	0.514	0.002	0.016	-0.014	0.475	-0.223	0.415	0.323		0.889				
M 3 (N=15 962)	Cit_a 1-5&10-20	0.786	0.776	0.002	0.020	-0.008	0.887	-0.008	0.406	0.392		0.716				
M 4 (N=15 050)	Cit_a 1-5&20+	1.439	1.114	-0.001	0.019		2.050	0.914	0.860	7.953	-0.032		1.306			

Table 3X1. minus CERN (i.e., just Southampton, Minho & QUT)

Model N.	Dependent Var.	Age	JIF	Auth_N	Ref_N	Page_N	Sci	Review	USA	OA	Age*OA	M	CERN	South	Minho	Queens
M 1 (N=17 939)	Cit_a 0&1-5	1.545	2.507	1.127	1.015		0.666	1.115		1.044						1.312
M 2 (N=14 941)	Cit_a 1-5&5-10	1.493	1.517		1.014	0.974	1.243	0.614	1.268	1.162		1.743				
M 3 (N=14 580)	Cit_a 1-5&10-20	1.769	1.766		1.018	0.976	1.521		1.254	1.176		1.597				
M 4 (N=13 743)	Cit_a 1-5&20+	2.332	2.029		1.018	0.982	2.217	1.699	1.676	1.749			1.718			1.350

Bold: significance < 0.01  
 Italic: significance between 0.01 and 0.05  
 Transformation: Exp(B) - 1

Model N.	Dependent Var.	Age	JIF	Auth_N	Ref_N	Page_N	Sci	Review	USA	OA	Age*OA	M	CERN	South	Minho	Queens
M 1 (N=17 939)	Cit_a 0&1-5	0.545	1.507	0.127	0.015			-0.334	0.115		0.044					0.312
M 2 (N=14 941)	Cit_a 1-5&5-10	0.493	0.517		0.014	-0.026	0.243	-0.386	0.268	0.162		0.743				
M 3 (N=14 580)	Cit_a 1-5&10-20	0.769	0.766		0.018	-0.024	0.521		0.254	0.176		0.597				
M 4 (N=13 743)	Cit_a 1-5&20+	1.332	1.029		0.018	-0.018	1.217	0.699	0.676	0.749				0.718		0.350

Table 3X2. minus CERN and Southampton (i.e. just Minho & QUT)

Model N.	Dependent Var.	Age	JIF	Auth_N	Ref_N	Page_N	Sci	Review	USA	OA	Age*OA	M	CERN	South	Minho	Queens
M 1 (N=17 657)	Cit_a 0&1-5	1.538	2.514	1.123	1.016		0.648			1.048						
M 2 (N=14 732)	Cit_a 1-5&5-10	1.497	1.511		1.015	0.972	1.239	0.619	1.271	1.147		1.733				
M 3 (N=14 382)	Cit_a 1-5&10-20	1.773	1.766		1.018	0.974	1.514		1.258	1.167		1.584				
M 4 (N=13 562)	Cit_a 1-5&20+	2.359	2.027		1.019	0.978	2.163	1.722	1.643	1.687						

Bold: significance < 0.01  
 Italic: significance between 0.01 and 0.05  
 Transformation: Exp(B) - 1

Model N.	Dependent Var.	Age	JIF	Auth_N	Ref_N	Page_N	Sci	Review	USA	OA	Age*OA	M	CERN	South	Minho	Queens
M 1 (N=17 657)	Cit_a 0&1-5	0.538	1.514	0.123	0.016			-0.352		0.048						
M 2 (N=14 732)	Cit_a 1-5&5-10	0.497	0.511		0.015	-0.028	0.239	-0.381	0.271	0.147		0.733				
M 3 (N=14 382)	Cit_a 1-5&10-20	0.773	0.766		0.018	-0.026	0.514		0.258	0.167		0.584				
M 4 (N=13 562)	Cit_a 1-5&20+	1.359	1.027		0.019	-0.022	1.163	0.722	0.643	0.687						