Original Paper

Will Academic Publication Improve the Quality of Doctoral Dissertation？

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Abstract

This article employs the regression analysis on the relation between the quality of doctoral dissertation and the number and quality of academic publication during the doctoral study as well as the time of first publication. The results indicate that the more the number of academic articles published in core journals, the higher the quality of the articles and the later the time of first academic publication, the more likely the Ph.D. candidates are to write high-quality dissertations.

Keywords

academic publication, quality of doctoral dissertation, regression analysis

1. Introduction

There exist a number of factors that have influence on the quality of doctoral dissertation and it has been an important issue for universities in China to explore continuously to improve the quality of doctoral cultivation. In order to improve the quality of the doctoral dissertation, many universities in China make it a requirement to obtain the doctoral dissertation that a Ph.D. candidate should have a certain number of academic publications during their doctoral studies. This has been a necessary condition for doctoral diploma application in many universities in China for more than twenty years, which is not only in line with the national jurisprudential requirements, but also is a reflection of academic requirements. However, does academic publication really have an impact on improving the quality of doctoral dissertations? To answer this question, this article conducts a quantitative statistical analysis of double-anonymous peer review results of 336 doctoral dissertations and the number and quality of academic articles published by these doctoral candidates during their doctoral studies, as well as the timing of the first academic

publication, and then explores whether there is a correlation between academic publication and the quality of doctoral dissertations.

2. Data and Research Design

2.1 Data

We select 336 doctoral dissertations and the publications of these 336 Ph.Ds. who graduated between 2017 and 2020 at the author's university as the research subjects.

2.2 Research Design

In order to ensure the quality of the doctoral dissertation, the Graduate Schools will conduct a two-way anonymous review of the dissertation before the thesis defense; moreover, the anonymous review can "reflect the quality of doctoral education more completely" (Liu, Guo, & Zhang, 2018). The anonymous reviewers make a comprehensive evaluation of the dissertation and assign a grade according to the quality of the dissertation; the evaluation grade at the author's University is divided into three categories of "A, B and C", and for the purpose of statistical analysis, the authors assign the scores of 10, 5 and 0 to the three grades from high to low. Therefore, the score of the review result of each dissertation is between 0 and 30, and hence the higher the score is, the better the quality of the dissertation is, and *vice versa*.

Then it comes to the classification of academic articles. Based on curriculum vitae provided in the 336 doctoral dissertations, the academic articles published by all doctoral candidates during their study period are counted; in the meanwhile, according to the classification of core journals in the author's university, domestic and international journals are divided into three categories respectively: A, B and C. Those not listed as core journals are classified as category D. In order to facilitate quantitative statistical analysis, academic articles are assigned with corresponding scores: 80 points for articles published in international journals of category A, 40 points for category B, 20 points for category C, and 5 points for category D; 40 points for articles published in domestic journals of category A, 20 points for category B, 5 points for category C, and 1 point for category D. Relatively speaking, the higher the total score of doctoral degree holders' research achievements, the higher the quality of their academic publications and *vice versa*.

3. Statistical Analysis of Academic Publication and the Quality of Doctoral Dissertation

3.1 General Description of Academic Publications

The total number of publications of 336 Ph.D. candidates is 1464, and 4.36 articles per person; overall, 12 Ph.D. candidates published more than or equal to 10 articles, accounting for 3.57% of the total number; 44 candidates published articles between 7-9, accounting for 13.1%; 139 candidates published articles between 4-6, accounting for 41.37%; 141 candidates published articles between 1-3, accounting for 41.96%. In terms of the publication in high-level journals, 20 doctoral candidates published articles in domestic A level journals, 73 candidates in domestic B level journals, 3 candidates in international A level journals and 11 candidates in international B level journals. In terms of the time of publishing the first academic articles, 48 of the candidates published their articles in the year of enrollment, 175 of them

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published within 1-2 years of enrollment, and 114 of them published their first papers in the year before or in the year of graduation.

3.2 Regression Analysis

In this paper, "the number, quality and the time of first publication of academic articles" are identified as the explanatory variables and "the quality of doctoral dissertations" is identified as the explanatory variable, the relation between which is analyzed by single-factor and multi-factor regressions using STATA software. Table 1 shows the regression results: column (1) to (3) are single-factor regression analyses without fixed-effects models, column (5) to (7) are single-factor regression analyses with fixed-effects models, and column (4) and (8) are multi-factor regression analyses with and without fixed-effects models respectively. It can be seen that both the quantity and quality of academic publications have a significant positive correlation on the quality of doctoral dissertation, that is, the more the number of publications, the higher the quality of dissertation, and similarly, the higher the quality of academic publication, the higher the quality of dissertation; in addition, the later the first academic publication is published, the higher the quality of dissertation. Furthermore, regardless of whether fixed model effects are taken into account or not, each of the three variables is equally significant for the improvement of dissertation quality, which means that the quality, quantity of the academic publications and quality of dissertation are not affected by their schools.

Therefore, in order to further analyze the influence of academic publications on the quality of dissertations, the authors conducted a further regression analysis based on the journal classifications, i.e., according to the four categories of international journals of A, B, C and D, and six categories of domestic journals of Chinese Social Science Citation Index (CSSCI) A, B, C, CSSCI Extension, Peking University Core journals and general journals. Table 2 shows the results of the regression analysis of sub-indicators, and it can be seen that publishing articles in Chinese Social Science Citation Index journals has a significant positive influence on the improvement of dissertation quality, while publishing academic papers in international core journals has no significant influence on the quality of dissertation. Specifically, the more articles published in C level journals of Chinese Social Science Citation Index, the better the quality of the dissertations, and this result is very robust.

Table 1. Regression Results of the Relation between the Quantity, Quality and the Time of First Academic Publication with the Quality of Doctoral Dissertation

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Rnumber	0.229**			0.145	0.234**			0.137
	(0.103)			(0.120)	(0.100)			(0.117)
Rscore		0.0095*		0.00350		0.0130**		0.00717
		(0.00570)		(0.00642)		(0.00645)		(0.00690)
			-1.870*	-1.203			-1.907*	-1.159
			(0.955)	(1.054)			(0.946)	(1.065)
School FE	NO	NO	NO	NO	YES	YES	YES	YES

Robust standard errors in parentheses

***$p<0.01$, **$p<0.05$, *$p<0.1$

Table 2. Regression Results of Sub-indicators

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CSSCI_ABC	0.296**	0.136			0.409***	0.273		
	(0.150)	(0.185)			(0.153)	(0.190)		
ENG_ABC	0.0654	-0.283			0.205	-0.0940		
	(0.295)	(0.483)			(0.314)	(0.483)		
CSSCI_A			0.752	0.0563			1.150	1.064
			(0.650)	(0.695)			(0.741)	(0.747)
CSSCI_B			-0.180	-0.529			-0.0432	-0.0791
			(0.294)	(0.346)			(0.315)	(0.316)
CSSCI_C			0.354**	0.230			0.475***	0.429**
			(0.175)	(0.178)			(0.174)	(0.178)
CSSCI_D			-0.000171	-0.0579			-0.358	-0.376
			(0.336)	(0.333)			(0.328)	(0.328)
Pek			-0.0139	-0.0780			0.447	0.418
			(0.279)	(0.282)			(0.309)	(0.315)
CHN_nor			0.253	0.179			0.0803	0.0229
			(0.248)	(0.251)			(0.234)	(0.237)
ENG_A			1.329**				1.023	0.947
			(0.567)				(0.713)	(0.756)
ENG_B			-0.169	-0.734			0.0601	0.114
			(1.094)	(1.210)			(1.155)	(1.162)
ENG_C			-0.0117	-0.390			0.176	0.0898

		(0.591)	(0.618)			(0.627)	(0.636)
ENG_nor		1.778***	1.631***			0.949*	0.871
		(0.548)	(0.561)			(0.547)	(0.566)
School FE	NO	NO	NO	NO	YES	YES	YES	YES

Robust standard errors in parentheses

***p<0.01, **p<0.05, *p<0.1

4. Conclusion

Through statistical analysis of the two-way anonymous review results of 336 doctoral dissertations and the quantity and quality of academic publications published by these doctoral candidates during their doctoral studies as well as the time of their first publication, the results show that academic publication is a positive academic training and has a significant contribution to the improvement of the quality of doctoral dissertations. Therefore, Graduate Schools in universities should pay attention to strengthening the academic writing training of doctoral students so as to encourage them to improve the quality of doctoral dissertations.

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References

Liu, C. R., Guo, H. Y., & Zhang, Z. B. (2018). Empirical Study on the Relationship between the Doctoral Candidates' Dissertation Quality and the Universities Where They Got Their Bachelor and Master Degrees. *Academic Degrees & Graduate Education*, *2018*(05), 45-49.

Xu, L. (2020). Publication of Academic Papers as the Doctoral Degree Awarding Criteria: Logical Justice and Misunderstanding Clarification. *Academic Degrees & Graduate Education*, *2020*(07), 31-39.