


# The penalty of containing more non-English articles

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**Abstract** Non-English journals still play important role in scholarly communication especially in social sciences, arts and humanities disciplines. Based on data from Web of Science and 2016 edition of Journal Citation Reports, we find that non-English publishing languages influence the journal impact factor (JIF) significantly. Journals with a high proportion of non-English publications suffer from low impact factor in both science and social sciences domains. The influence of non-English publications on JIF is weak for journals with a small proportion of non-English publications. We argue that it is not suitable to compare the JIFs of a non-English journal with an English journal which are calculated by using citation data from an international database such as Web of Science.

**Keywords** Publishing language · Non-English journal · Journal impact factor · JIF quartile

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## Introduction

Although English is the ‘lingua franca’ of international scholarly communication in science, non-English languages still play important role in social sciences, arts and humanities disciplines (Liu 2017). However, non-English articles are widely stated to suffer from low citations (Bornmann et al. 2012; Liang et al. 2013; Tahamtan et al. 2016). The serious language bias in receiving citations has significant influence on citation-based rankings (van Raan et al. 2011). Besides, studies also probe the language effect on journal impact factor (JIF) (González-Alcaide et al. 2012; Liang et al. 2013; Sangwal 2013). Previous studies are mainly focusing on some individual countries or disciplines, however, a full and up-to-date picture about the relationship between non-English publishing language and JIF is still needed.

## Data and method

The Web of Science’s (WoS) Science Citation Index Expanded (SCI) and Social Sciences Citation Index (SSCI) are used in this study to identify each journal’s total number of publications, total number of English publications, and total number of non-English publications. We use the field normalized JIF quartile instead of JIF to make the comparison of JIFs from different disciplines possible. We retrieve the 2016 edition of Journal Citation Reports (JCR, including both Science Edition and Social Sciences Edition) to get the JIF quartile information. In order to be consistent with the calculation of JIF, we restrict the publication year to 2014 and 2015 and only two citable items (articles and reviews) are considered. The data were collected via the library of Xi’an Jiao Tong University on 14 August 2017.

Journals that have publications in both 2014 and 2015 and also appear in the 2016 edition of JCR are considered in this study (A specific journal’s title in WoS may not be identical to that in JCR, so manual checking is needed during the journal selection process). According to JCR, journals belong to more than one Web of Science categories may have different JIF quartile values (More information about JIF quartiles, please refer to <http://ipscience-help.thomsonreuters.com/incitesLive/9053-TRS.html>. Accessed on 23 August 2017). In order to avoid the double-counting problem, we assign the JIF quartile values of journals according to the extreme scenario, i.e. an ‘over-rating’ scenario whereby we only assign the highest quartile value for these multi JIF quartile journals (JIF Q1 is the highest quartile) (Liu et al. 2016).

In this study, we use the proportion of English publications published in a specific journal as the main indicator of publishing language instead of other qualitative variables such as English journals, bilingual journals or non-English journals. All the journals are allocated to twelve groups exclusively based on the proportion of English publications among all their publications published between 2014 and 2015. Namely, 0% (fully non-English journal), 0–10% (high proportion of non-English publication), up to 90–100% (high proportion of English publication) and 100% (fully English journal) respectively.

## Analyses

### Publishing language and JIF quartile in SCI

8856 titles are included in the 2016 edition of Journal Citation Reports-Science Edition, however, we only consider 8743 journals that have published records in both 2014 and 2015 for analysis. We calculate each journal’s proportion of English publications among all its publications published between 2014 and 2015.

Table 1 shows the distribution of SCI journals among four JIF quartiles. 426 SCI journals are with a certain proportion (from 10% to 100%) of non-English publications. However, these journals suffer from low impact factor. Over 97% (414 out of 426) of these journals’ JIF quartiles are Q3 or Q4. One exception is the journal of *Emergencias* which with a high proportion of non-English publications (99%) but is ranked as Q1 journal (3 of 24) in Emergency Medicine category. One possible reason is that as stated in the authors guideline section of this journal’s homepage “Accepted articles will be published in Spanish in the print journal and in both Spanish and English online regardless of the language in which they were submitted” (<http://emergencias.portalsemes.org/informacion-para-autores/english>. Accessed on 23 August 2017). So it is reasonable to conclude that SCI journals with a high proportion of non-English publications suffer from low impact factor and high impact factor SCI journals are unlike to publish a large proportion of non-English publications.

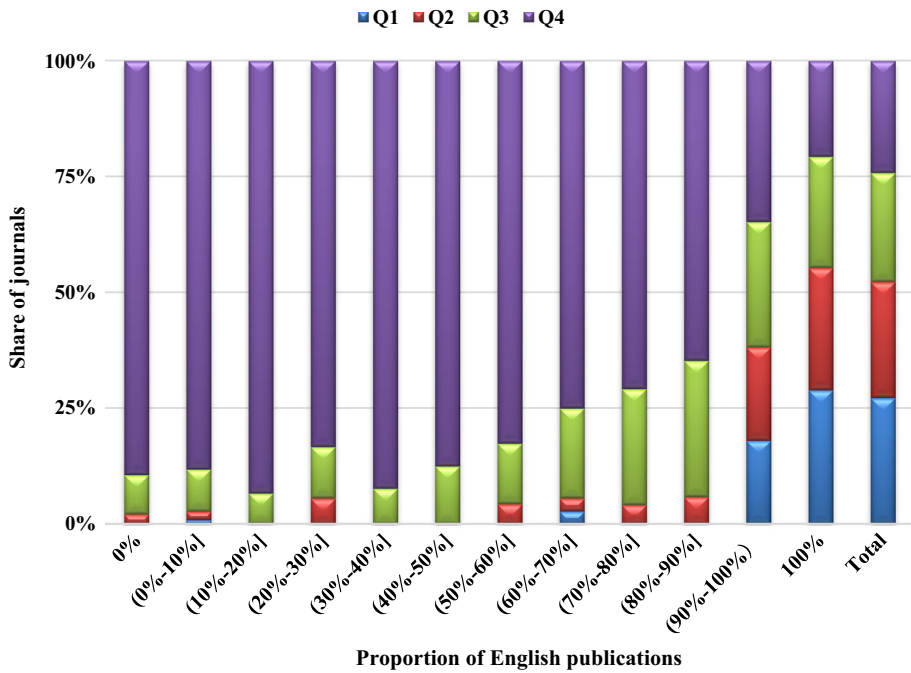
However, due to the relatively small share of non-English journals (including fully non-English journals and journals with a certain proportion of non-English publications), the share of JIF Q1 journals among fully-English SCI journals is only a slightly higher than that of all SCI journals (28.9% vs 27.2%).

Figure 1 also illustrates the relative shares of SCI journals among four JIF quartiles in different groups. According to the definition of JIF quartile and allocation method used in

**Table 1** Distribution of SCI journals among four JIF quartiles

Proportion of English publications	JIF Q1	JIF Q2	JIF Q3	JIF Q4	Total
0%	0	1	4	42	47
(0–10%]	1	2	10	97	110
(10–20%]	0	0	3	42	45
(20–30%]	0	2	4	30	36
(30–40%]	0	0	3	36	39
(40–50%]	0	0	4	28	32
(50–60%]	0	1	3	19	23
(60–70%]	1	1	7	27	36
(70–80%]	0	1	6	17	24
(80–90%]	0	2	10	22	34
(90–100%)	42	47	63	81	233
100%	2338	2134	1940	1672	8084
Total	2382	2191	2057	2113	8743

The raw data were collected from Web of Science and 2016 edition of JCR-Science Edition via the library of Xi’an Jiao Tong University on 14 August 2017



**Fig. 1** Relative shares of SCI journals among four JIF quartiles in different groups. The raw data were collected from Web of Science and 2016 edition of JCR-Science Edition via the library of Xi’an Jiao Tong University on 14 August 2017

**Table 2** Distribution of SSCI journals among four JIF quartiles

Proportion of English publications	JIF Q1	JIF Q2	JIF Q3	JIF Q4	Total
0%	0	2	4	45	51
(0–10%]	0	1	8	38	47
(10–20%]	1	2	4	24	31
(20–30%]	0	2	5	19	26
(30–40%]	0	1	4	11	16
(40–50%]	1	1	4	9	15
(50–60%]	0	0	2	6	8
(60–70%]	0	0	3	5	8
(70–80%]	0	1	4	18	23
(80–90%]	0	1	8	11	20
(90–100%)	4	11	21	27	63
100%	829	777	718	556	2880
Total	835	799	785	769	3188

The raw data were collected from Web of Science and 2016 edition of JCR-Social Sciences Edition via the library of Xi’an Jiao Tong University on 14 August 2017

**ZEITSCHRIFT FÜR PSYCHOSOMATISCHE MEDIZIN UND PSYCHOTHERAPIE**



**Impact Factor**

**0.769 0.788**

2016 5 year

JCR® Category	Rank in Category	Quartile in Category
PSYCHIATRY <i>in SCIE edition</i>	<b>128 of 142</b>	<b>Q4</b>
PSYCHOLOGY	<b>66 of 77</b>	<b>Q4</b>
PSYCHOLOGY, CLINICAL	<b>103 of 121</b>	<b>Q4</b>
PSYCHOLOGY, MULTIDISCIPLINARY	<b>88 of 129</b>	<b>Q3</b>
PSYCHOLOGY, PSYCHOANALYSIS	<b>3 of 13</b>	<b>Q1</b>

Data from the 2016 edition of *Journal Citation Reports*

**Publisher**

VANDENHOECK & RUPRECHT, THEATERSTRASSE 13., D-37073 GOTTINGEN, GERMANY

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**Research Domain**

Psychology  
Psychiatry

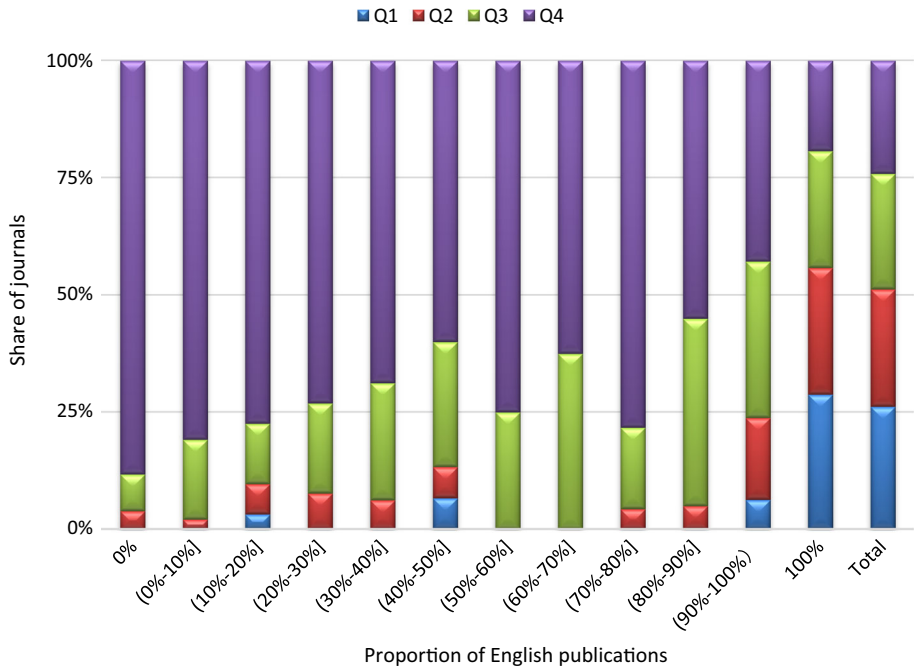
**Fig. 2** JIF quartile of zeitschrift für psychosomatische medizin und psychotherapie

this study, journals should be close to equally distributed among four JIF quartiles which favors JIF Q1 a little bit. Just as shown on the right side of Fig. 1, each JIF quartile accounts for about 25% of all SCI journals. However, the JIF quartiles are low for journals with a high proportion of non-English publications evidenced by the dominating shares of Q3 and Q4 journals shown on the left side of Fig. 1. Journals with a small proportion of non-English publications are slightly influenced by the written language (group 90–100%).

**Publishing language and JIF quartile in SSCI**

The 2016 edition of Journal Citation Reports-Social Sciences Edition contains 3236 titles. We only include 3188 journals that have published records in both 2014 and 2015 for further analysis. We calculate each journal’s proportion of English publications among all its publications published between 2014 and 2015 and assign them to one of the twelve groups.

Table 2 demonstrates the distributions of SSCI journals among four JIF quartiles. Similar to the findings based on SCI journals, journals with a high proportion of non-English publications also suffer from low impact factor. About 245 SSCI journals are with



**Fig. 3** Relative shares of SSCI journals among four JIF quartiles in different groups. The raw data were collected from Web of Science and 2016 edition of JCR-Social Sciences Edition via the library of Xi'an Jiao Tong University on 14 August 2017

a certain share (from 10% to 100%) of non-English publications. And about 95% of these journals' JIF quartiles are Q3 or Q4. One exception is the journal *Zeitschrift für Psychosomatische Medizin und Psychotherapie* with about 87% of its publications in German but ranked as Q1 journal (3 out of 13 in *Psychoanalysis Psychology*) (Fig. 2). Nevertheless, this journal's JIF is only 0.769 and ranked as Q3 journal in one category and Q4 in other three categories. Therefore it is reliable to conclude that SSCI journals with a high proportion of non-English publications also suffer from low impact factor, and high impact factor SSCI journals are unlikely to publish a large share of non-English publications.

Similar to SCI journals, due to the relatively small share of non-English journals (including fully non-English journals and journals with a certain proportion of non-English publications), the share of JIF Q1 journals among fully-English SSCI journals is only a bit higher than that of all SSCI journals (28.8% vs. 26.2%).

Figure 3 also depicts the relative shares of SSCI journals among four JIF quartiles in different groups. Just as demonstrated on the right side of Fig. 3, each JIF quartile accounts for roughly 25% of all SSCI journals. However, the JIF quartiles are also low for journals with a high proportion of non-English publications evidenced by the dominating shares of Q3 and Q4 journals demonstrated on the left side of Fig. 3. Similarly, journals with a small proportion of non-English publications are influenced by the language effect relatively marginal (group 90–100%).

## Discussion

By using Web of Science and 2016 edition of Journal Citation Reports, this study probes the relationship of non-English publishing language and JIF (quartile). We find that non-English publishing languages influence the JIF significantly. And the extent of non-English publishing languages' influence on the JIF is related to the proportion of non-English publications published in this specific journal. Journals with a high proportion of non-English publications suffer from low impact factor in both science and social sciences domains. The influence of non-English publications on JIF is weak for journals with a small proportion of non-English publications.

The JIF of non-English journals is an indicator of international visibility or impact. However, low JIF of non-English journals cannot be fully equal to low quality or low impact. A major reason for this is that a majority of publications in WoS are written in English (Liu 2017; Liu et al. 2015; Liu and Li 2017; Tang et al. 2015) and the exist of self-citation effect of language (Liang et al. 2013). In this sense it is not suitable to compare the JIFs of a non-English journal with an English journal which are calculated by using citation data from an international database such as WoS. It is more reasonable to compare the JIFs of journals with the same publishing language.

This study has some limitations. First, slight misidentification of publishing language may still exist in WoS. Second, a comparative study based on Scopus can be done in the future. Last but not least, a more detailed research focus on some major non-English publishing languages is worthy of further investigation.

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## References

- Bornmann, L., Schier, H., Marx, W., & Daniel, H.-D. (2012). What factors determine citation counts of publications in chemistry besides their quality? *Journal of Informetrics*, 6(1), 11–18. <https://doi.org/10.1016/j.joi.2011.08.004>.
- González-Alcaide, G., Valderrama-Zurián, J. C., & Aleixandre-Benavent, R. (2012). The impact factor in non-english-speaking countries. *Scientometrics*, 92(2), 297–311. <https://doi.org/10.1007/s11192-012-0692-y>.
- Liang, L., Rousseau, R., & Zhong, Z. (2013). Non-english journals and papers in physics and chemistry: Bias in citations? *Scientometrics*, 95(1), 333–350. <https://doi.org/10.1007/s11192-012-0828-0>.
- Liu, W. (2017). The changing role of non-English papers in scholarly communication: Evidence from Web of Science's three journal citation indexes. *Learned Publishing*, 30(2), 115–123. <https://doi.org/10.1002/leap.1089>.
- Liu, W., Hu, G., & Gu, M. (2016). The probability of publishing in first-quartile journals. *Scientometrics*, 106(3), 1273–1276. <https://doi.org/10.1007/s11192-015-1821-1>.
- Liu, W., Hu, G., Tang, L., & Wang, Y. (2015). China's global growth in social science research: Uncovering evidence from bibliometric analyses of SSCI publications (1978–2013). *Journal of Informetrics*, 9(3), 555–569. <https://doi.org/10.1016/j.joi.2015.05.007>.
- Liu, W., & Li, Y. (2017). Open access publications in sciences and social sciences: A comparative analysis. *Learned Publishing*. <https://doi.org/10.1002/leap.1114>.
- Sangwal, K. (2013). Some citation-related characteristics of scientific journals published in individual countries. *Scientometrics*, 97(3), 719–741. <https://doi.org/10.1007/s11192-013-1053-1>.

- Tahamtan, I., Safipour Afshar, A., & Ahamdzadeh, K. (2016). Factors affecting number of citations: A comprehensive review of the literature. *Scientometrics*, *107*(3), 1195–1225. <https://doi.org/10.1007/s11192-016-1889-2>.
- Tang, L., Shapira, P., & Youtie, J. (2015). Is there a clubbing effect underlying Chinese research citation increases? *Journal of the Association for Information Science and Technology*, *66*(9), 1923–1932. <https://doi.org/10.1002/asi.23302>.
- van Raan, A. F. J., van Leeuwen, T. N., & Visser, M. S. (2011). Severe language effect in university rankings: Particularly Germany and France are wronged in citation-based rankings. *Scientometrics*, *88*(2), 495–498. <https://doi.org/10.1007/s11192-011-0382-1>.