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RESEARCH BRIEF

Assessing and Ranking ASEAN Academic Journals

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Academic journals play a crucial role in the propagation and advancement of human knowledge. They serve as key avenues where discoveries and new ideas are communicated and presented. Over the years and decades, academic publishing has become the primary indicator of research productivity in terms of quality and quantity of the publications of the researcher. Recently, the ASEAN region has witnessed an astronomic rise in its research productivity (Nguyen & Pham, 2011; Hassan, Haddawy, Kuinkel, Degelsegger, & Blasy, 2012). Accompanying this research productivity boom is the thrust to improve the quality of academic journals published by ASEAN countries. Elevated awareness on the need to improve the reputation of these journals will heavily rely on journal metrics to guide editorial decisions (Chi, 2016). Thus, the ASEAN Citation Index (ACI) was established. ACI aims to consolidate bibliographic information about ASEAN journals and the information they carry, as well as to help them achieve accreditation in international databases such as the Clarivate Analytics databases and Scopus (Sombatsompop et al., 2011).

The improvement of the quality of local journals represents a nationally important academic endeavor. Local journals have a significant role in the accumulation of the regional knowledge base since they serve as crucial intellectual repositories of studies in which the findings are highly relevant to the ASEAN region such as biodiversity mapping, economic baselines, and pathologic incidences, among others. In addition, most local journals are freely accessible, which greatly necessitates the need for reliability and accuracy of the information presented. Comprehensive information regarding the performance and profile of ASEAN journals is scarce. Most studies report either country-specific data (Tecson-Mendoza, 2015; Sanni, Zainab, Raj, & Abrizah, 2014; Zainab, Sanni, Edzan, & Koh, 2012), or subject/journal-oriented findings (Janairo, 2018; Abrizah, 2016; Sanni & Zainab, 2010). Thus, this study aims to quantify the quality of ASEAN journals based from the database—derived journal metrics—and obtain the subject distribution. The findings will be beneficial to researchers, research managers, and policymakers in the region, especially now that journal improvement has become a priority.

Methods

The academic journals included in the analysis are ASEAN-published, Scopus-listed journals with available Source Normalized Impact per Paper (SNIP) values from 2014–2016. The initial list of journals was taken from SCImago Journal and Country Rank (www.scimagojr.com). Local journals that are published by international publishers were subsequently added to

the list. The SNIP average for each journal was based from the 2014–2016 SNIP values reported by Scopus (https://journalmetrics.scopus.com/). The ASEAN SNIP average was calculated from the journal SNIP average of the 203 journals which met the selection criteria. The full dataset obtained for this study can be freely downloaded at https://github.com/jijanairo/ASEAN-Journals.

Results

From the 10 ASEAN countries, only Brunei, Indonesia, Malaysia, Philippines, Singapore, and Vietnam have at least one active Scopus-indexed journal which met the selection criteria. There were 203 journals assessed in this study, wherein the three-year SNIP (2014–2016) average was determined to be 0.564. This value was set as the benchmark to determine the journal standing. A three-year SNIP average greater than 0.564 means that the journal has exceeded the regional standard. The country distribution of the 86 journals that passed the benchmark is shown in Figure 1. Singapore accounts for 55% of the journals that surpassed the benchmark.

The top 20 ASEAN journals based on their 2014–2016 SNIP average is shown in Table 1, wherein Singapore-published journals dominate the rankings. There were 14 journals in the top 20 which were published in Singapore, 3 from Malaysia, 2 from Indonesia, and 1 from the Philippines.

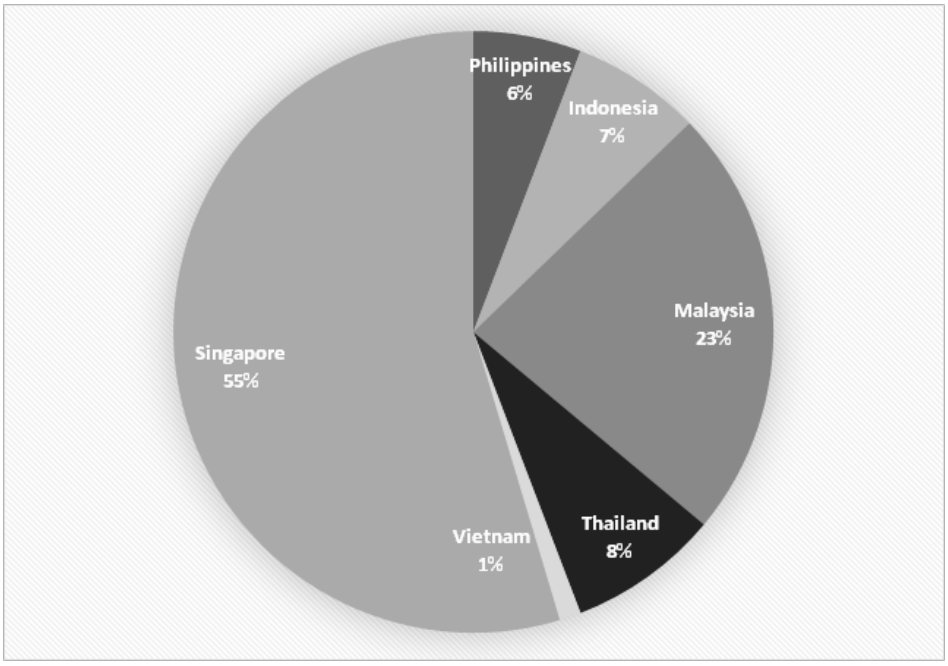

Figure 1. Country distribution of journals that exceeded the ASEAN SNIP average.

Table 1
Ranking of the Top 20 ASEAN Journals Based on the SNIP Average from 2014–2016

Journal	2014 SNIP	2015 SNIP	2016 SNIP	SNIP Average	Country
Foundations and Trends in Computer Graphics and Vision	6.779	2.576	4.928	4.761	Singapore
International Journal of Neural Systems	2.278	1.732	1.519	1.843	Singapore
Mathematical Models and Methods in Applied Sciences	1.673	1.783	1.695	1.717	Singapore
Contemporary Southeast Asia	1.282	1.248	1.634	1.388	Singapore
Reviews in Mathematical Physics	1.215	1.396	1.432	1.347667	Singapore
Asia Pacific Journal of Management	1.448	1.321	1.23	1.333	Singapore
Journal of Mathematical Logic	1.551	0.947	1.474	1.324	Singapore
Journal of Topology and Analysis	0.792	1.464	1.648	1.301333	Singapore
Communications in Contemporary Mathematics	1.035	1.321	1.167	1.174333	Singapore
Bulletin of Indonesian Economic Studies	1.276	0.934	1.152	1.120667	Indonesia
Bulletin of the Malaysian Mathematical Sciences Society	1.02	1.076	1.096	1.064	Malaysia
International Journal of Power Electronics and Drive Systems	0.885	1.222	1.062	1.056333	Indonesia
Raffles Bulletin of Zoology	1.023	0.992	1.098	1.037667	Singapore
Philippine Studies: Historical and Ethnographic Viewpoints	1.018	0.98	1.038	1.012	Philippines
GEMA Online Journal of Language Studies	0.895	0.709	1.432	1.012	Malaysia
International Journal of Information Technology and Decision Making	1.223	0.963	0.735	0.973667	Singapore
Sojourn	1.281	0.786	0.847	0.971333	Singapore
International Journal of Number Theory	0.931	1.036	0.938	0.968333	Singapore
American Journal of Chinese Medicine	1.141	0.893	0.868	0.967333	Singapore
International Journal of Automotive and Mechanical Engineering	1.043	1.246	0.61	0.966333	Malaysia

Journals about science, technology, and mathematics constitute nearly a quarter of the periodicals that exceeded the benchmark, as seen in the subject distribution chart depicted by Figure 2.

To put into a wider context the meaning and value of the assessment and rankings of the ASEAN academic journals, a similar analysis was also carried out for some of the top Asian journals (Table 2). Comparing the performance of the selected Asian journals with that of the ASEAN journals indicate that only the Singapore-based journals are able to keep up, or even exceed the performance of the selected Asian journals. The academic journals from Malaysia, Indonesia, the Philippines, Thailand, and Vietnam appear to lag behind based on the SNIP metrics.

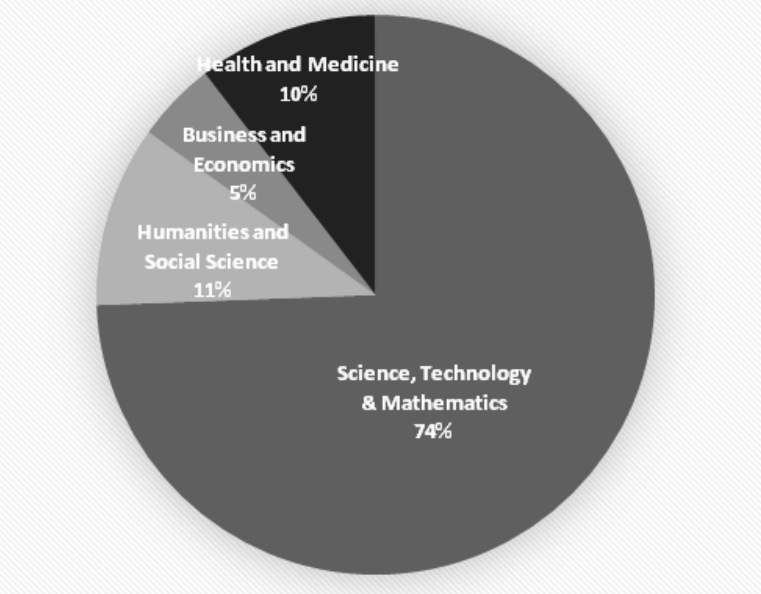

Figure 2. Subject distribution of journals that exceeded the ASEAN SNIP average.

Table 2
Performance of Selected Asian Journals Based on SNIP

Journal	2014 SNIP	2015 SNIP	2016 SNIP	Average	Country
Fungal Diversity	2.694	2.67	3.425	2.930	Hong Kong
Gondwana Research	2.661	2.609	2.612	2.627	Japan
Petroleum Exploration and Development	2.359	1.948	1.764	2.023	China
Journal of Nuclear Medicine	1.984	1.891	1.804	1.893	China
Nano Research	1.862	1.639	1.446	1.649	China
Circulation Journal	1.565	1.535	1.387	1.496	Japan
Statistica Sinica	1.71	1.261	1.28	1.417	Taiwan
Geoscience Frontiers	1.273	1.484	1.378	1.378	China
Experimental and Molecular Medicine	0.884	1.267	1.347	1.166	South Korea
Journal of the Meteorological Society of Japan	0.739	0.865	1.186	0.930	Japan

Discussion

Journal quality evaluation is a critical component of science communication. This activity is not only important for authors and publishers, but also for librarians, students, and other members of the academic community. Journal quality is often associated with citations, especially after considering that only 62.6% of the academic articles in the world are cited for the period 2006–2015 (Jang, 2017). The Journal Impact Factor (JIF) by Clarivate Analytics was once often used to determine and compare the quality of journals. The JIF takes the ratio of the number of citations of the journal with the number of published articles for a given year. However, shortcomings of this journal metrics have led to the development of alternative tools to measure the performance of the journal (Bornmann, Marx, Gasparyan, & Kitas, 2012). Among the alternative metrics are the SCImago Journal Rank (SJR) and SNIP (Colledge et al., 2010). SJR was formulated on the idea that "not all citations are equal," wherein SJR gives more weight to citations coming from higher-ranked journals (Gonzalez-Pereira, Guerrero-Bote, & Moya-Anegon, 2010). Thus, two journals with identical number of citations and published papers may have different SJR scores. SNIP, on the other hand, accounts for topical citation variability. SNIP recognizes that certain fields are more likely to get cited than another field, and this citation potential is included in the calculation. Thus, SNIP can be used to compare journals in different fields (Moed, 2010). SNIP was therefore used to assess and rank ASEAN-published journals, especially after considering the diversity of journal topics that the ASEAN region publishes.

The results of the analysis and rankings have brought forward several key points which describe the publishing landscape in the region. The first, and most apparent point is the quality gap between journals published by Singapore and those from the other ASEAN countries. This result is somehow expected, considering that most of the journals from Singapore are published and managed by the international commercial publisher, World Scientific. This observation is further magnified when the quality of the journals published by the Singapore-less ASEAN bloc is compared with Asian journals. The results provide the quantitative rationale for the urgent implementation of interventions that are aimed towards the improvement in the quality and standing of ASEAN journals. In the Philippines, the drive to improve local academic journals is reflected in the recent launch of the Journal Incentive Program (JIP) by the Commission of Higher Education (CHED). JIP intends not only to increase the number of Philippine journals recognized in international databases but also to improve the quality of local journals that are already listed in Clarivate Analytics databases and Scopus. For the other ASEAN countries, their respective local citation indices support journal development and quality improvement. The attention and importance given by the region to science, technology, and mathematics is another interesting point raised by the presented findings. The current subject distribution of ASEAN journals reflects the prevailing thematic research trend in the region. While this is not necessarily a bad thing, more efforts should be exerted in developing more journals outside of this dominant field.

Conclusion

The study has presented information regarding the quality of ASEAN journals, from which several points were identified that aptly describe the current publishing landscape in the region. A regional journal standard was determined based on the three-year SNIP average of 203 ASEAN journals. Journals that exceeded this benchmark were mostly from Singapore, highlighting the large quality divide between Singapore journals with other ASEAN journals. Journals that exceeded the calculated benchmark were mostly focusing on science, technology, and mathematics, underscoring the need to further develop other journals outside of these fields. By and large, the results provide quantitative motivation in order to further improve the quality of the academic journals in the region.

Acknowledgement

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References

Abrizah, A. (2016). Performance of Malaysian medical journals. *The Malaysian Journal of Medical Sciences, 23*(2), 1–5.

Bornmann, L., Marx, W., Gasparyan, A. Y., & Kitas, G. D. (2012). Diversity, value and limitations of the journal impact factor and alternative metrics. *Rheumatology International, 32*(7), 1861–1867.

Chi, Y. (2016). Scientific publishing in the Asian century: An international perspective. *Science Editing, 3*(2), 112–115.

Colledge, L., De Moya-Anegon, F., Guerrero-Bote, V. P., Lopez-Illescas, C., El Aisati, M., & Moed, H. F. (2010). SJR and SNIP: Two new journal metrics in Elsevier's Scopus. *Serials, 23*(3), 215–221.

Gonzalez-Pereira, B., Guerrero-Bote, V. P., & Moya-Anegon, F. (2010). A new approach to the metric of journals' scientific prestige: The SJR indicator. *Journal of Informetrics, 4*(3), 379–391.

Hassan, S., Haddawy, P., Kuinkel, P., Degelsegger, A., & Blasy, C. (2012). A bibliometric study of research activity in ASEAN related to the EU in FP7 priority areas. *Scientometrics, 91*,1035–1051.

Janairo, J. I. B. (2018). Reviving a scientific journal: Challenges and strategies. *Science Editing*, *5*(1), 59–61.

Jang, H. (2017). Should we wait until an article is cited? *Science Editing, 4*(1), 39–40.

Moed, H. F. (2010). Measuring contextual citation impact of scientific journals. *Journal of Informetrics, 4*(3), 265–277.

Nguyen, T. Y., & Pham, L. T. (2011). Scientific output and its relationship to knowledge economy: An analysis of ASEAN countries. *Scientometrics, 89*,107–117.

Sanni, S. A., Zainab, A. N., Raj, R. G., & Abrizah, A. (2014). Measuring journal diffusion using periodic citation counts. *Malaysian Journal of Library & Information Science, 19*(1), 23–36.

Sanni, S. A., & Zainab, A. N. (2010). Google Scholar as a source for citation and impact analysis for a non-ISI indexed medical journal. *Malaysian Journal of Library & Information Science, 15*(3), 35–51.

Sombatsompop, N., Premkamolnetr, N., Markpin, T., Ittiritmeechai, S., Wongkaew, C., Yochai, . . . & Beng, L. (2011). Viewpoints on synergizing ASEAN academic visibilities through research collaboration and the establishment of an ASEAN Citation Index Database. *Asia Pacific Viewpoints, 52*(2), 207–218.

Tecson-Mendoza, E. M. (2015). Scientific and academic journals in the Philippines: Status and challenges. *Science Editing, 2*(2),73–78.

Zainab, A. N., Sanni, S. A., Edzan, N. N., & Koh, A. P. (2012). Auditing scholarly journals published in Malaysia and assessing their visibility. *Malaysian Journal of Library & Information Science, 17*(1), 65–92.