

Outlook of Asian Science Journals

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Introduction

- This plenary address focuses on the outlook of Asian science journals. Here, science refers to the STEM disciplines.
- It is predominantly based on my observations of the international publishing landscape, my experiences with CASE since its inception, and my experiences in editing journals.
- I fervently believe that science journals in Asia can pole-vault to the next level with strategic thinking, thus contributing further to the cause of scientific publishing as well as catalysing capacity building in a country.

Importance of science journals

- Provides a platform for research done by scientists to be disseminated to wider audience in the fraternity,
- Compared to conference proceedings, online dissemination and monographs, the journal is generally regarded as more prestigious.
- Allows other scientists to see what is trending in their field and to see how gaps in the literature can be bridged.

International journals

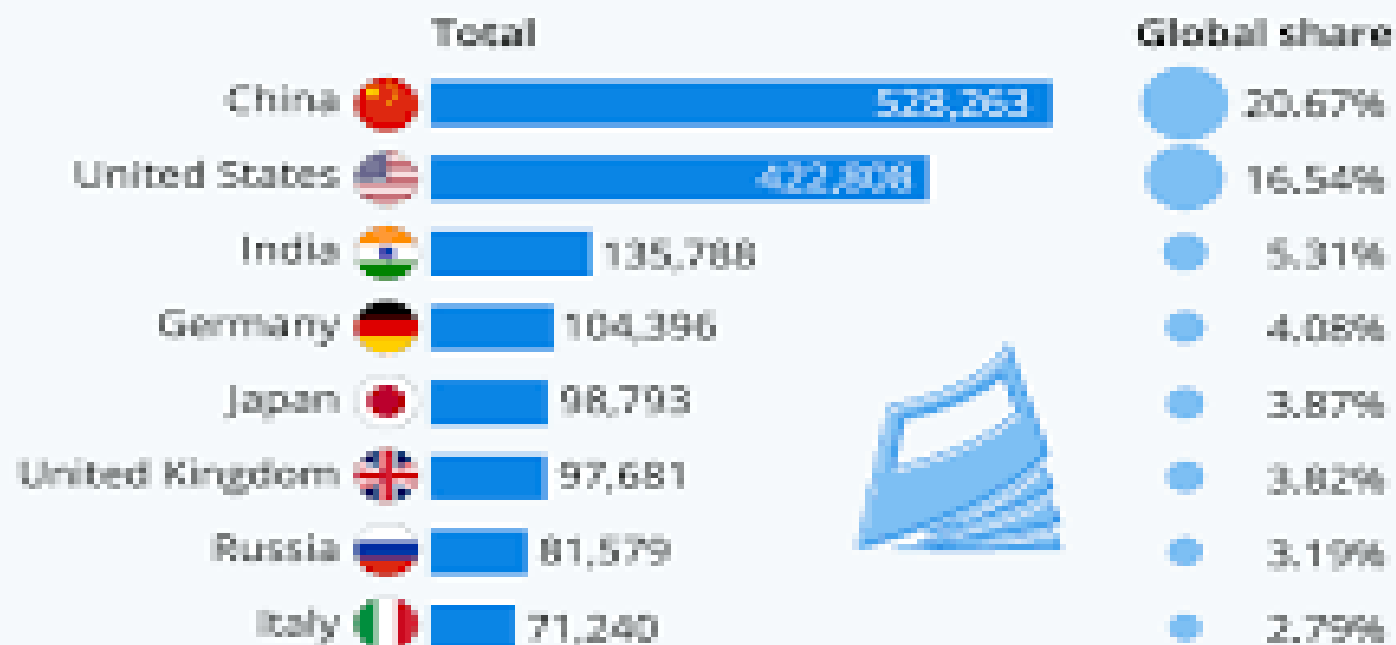
- Generally regarded as those that have reached a certain stature in the field.
- International in outlook- that is, they feature articles from authors of different countries.
- Metrics are available for their standing in the scholarly field – for example, impact factors, citation counts and cite scores.
- Editorial board comprises leaders in the field, who act as gatekeepers to ensure that only articles which pass through a few layers of scrutiny get published in the journals.
- Trend-setting, that is, they feature state-of-the-art research that has the potential to be scaled up to the next level.

International journals (cont'd)

- Large pool of reviewers, who are themselves practising scientists and who have made distinct contributions.
- Published by leading international publishers or scholarly societies – affiliation to one of these provides clout to the journal.
- Acceptance rates are generally low.
- Emphasis is more on work that extends the field rather than run-of-the-mill types of research.
- Publications in international journals are matter of prestige and recognition to authors and their institutions.

The Countries Leading The World In Scientific Publications

Number of science & engineering articles published in peer-reviewed journals in 2018



Source: National Science Foundation



Local journals

- They are published within a country by local tertiary institutions or local professional societies.
- Provides an outlet for scientific work done locally in tertiary institutions that have generally not yet reached levels expected of international journals but are acceptable.
- Provides another platform for capacity building for the local scientific community.
- Provides an outlet for publishing research that may not appeal to international audiences – for example, indigenous flora and fauna, and topics that generate only local traction.

International journals vs local journals

- If only publications in international journals are mandated, then very little scientific research from developing countries will get published.
- Local scientists and doctoral students will be deprived of another platform to feature their work.
- There is just not enough scientific journals in a discipline to accommodate the research output from all scientists.
- Hence, local scientific journals are still needed.

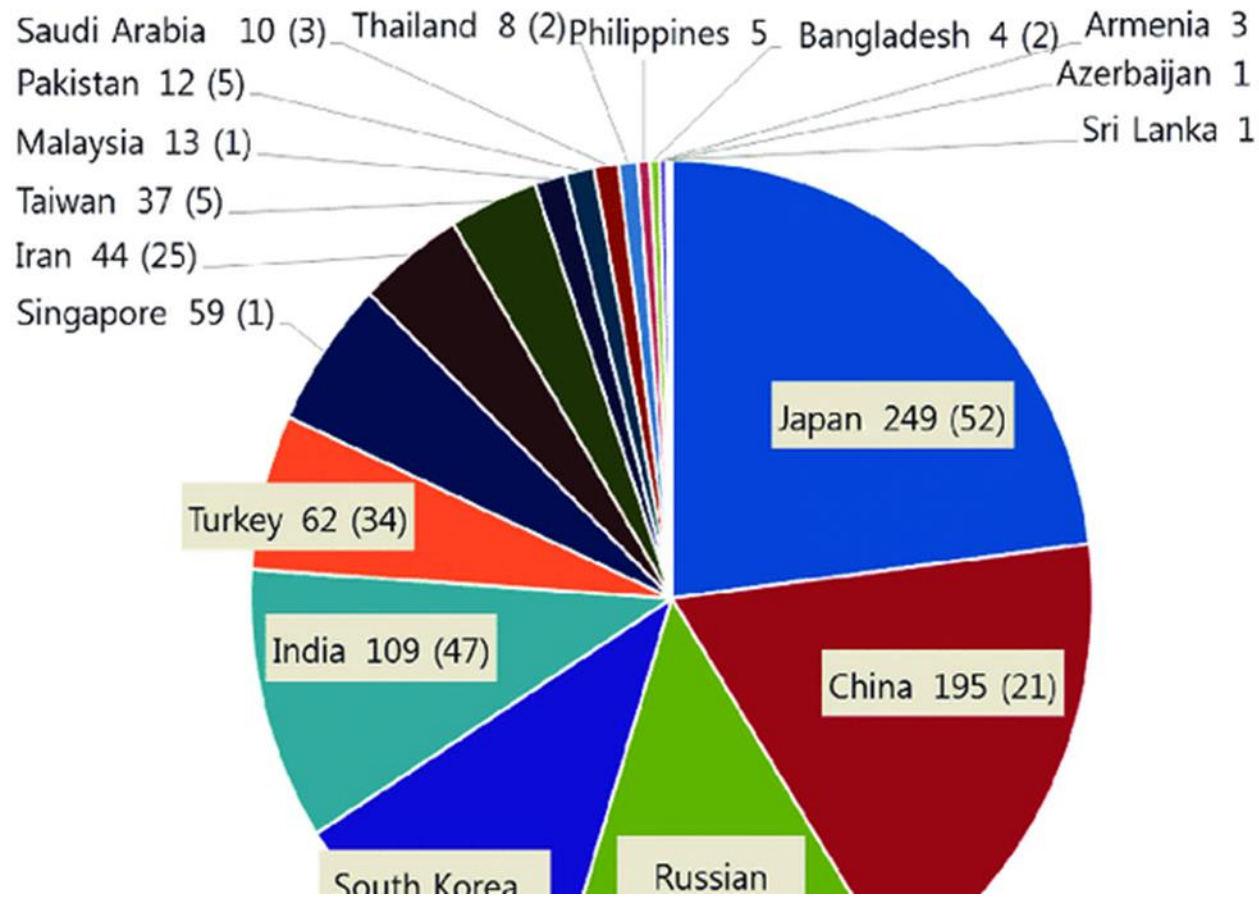
Universities and scientific journals

- There are about 20,000 universities in the world, with many of them focusing on STEM disciplines and research.
- Current numbers of scientific journals in a field are just not adequate to cater to the burgeoning research output from universities in all countries, including developing countries,
- As universities are considered as portals of learning, research and higher education, there needs to be an ecosystem that can recognize research that have not yet reached international standards but are adequate from a local perspective as long as scientific accuracy is not compromised.
- There is thus a need for local journals to serve the needs of researchers in universities in developing countries in some way.

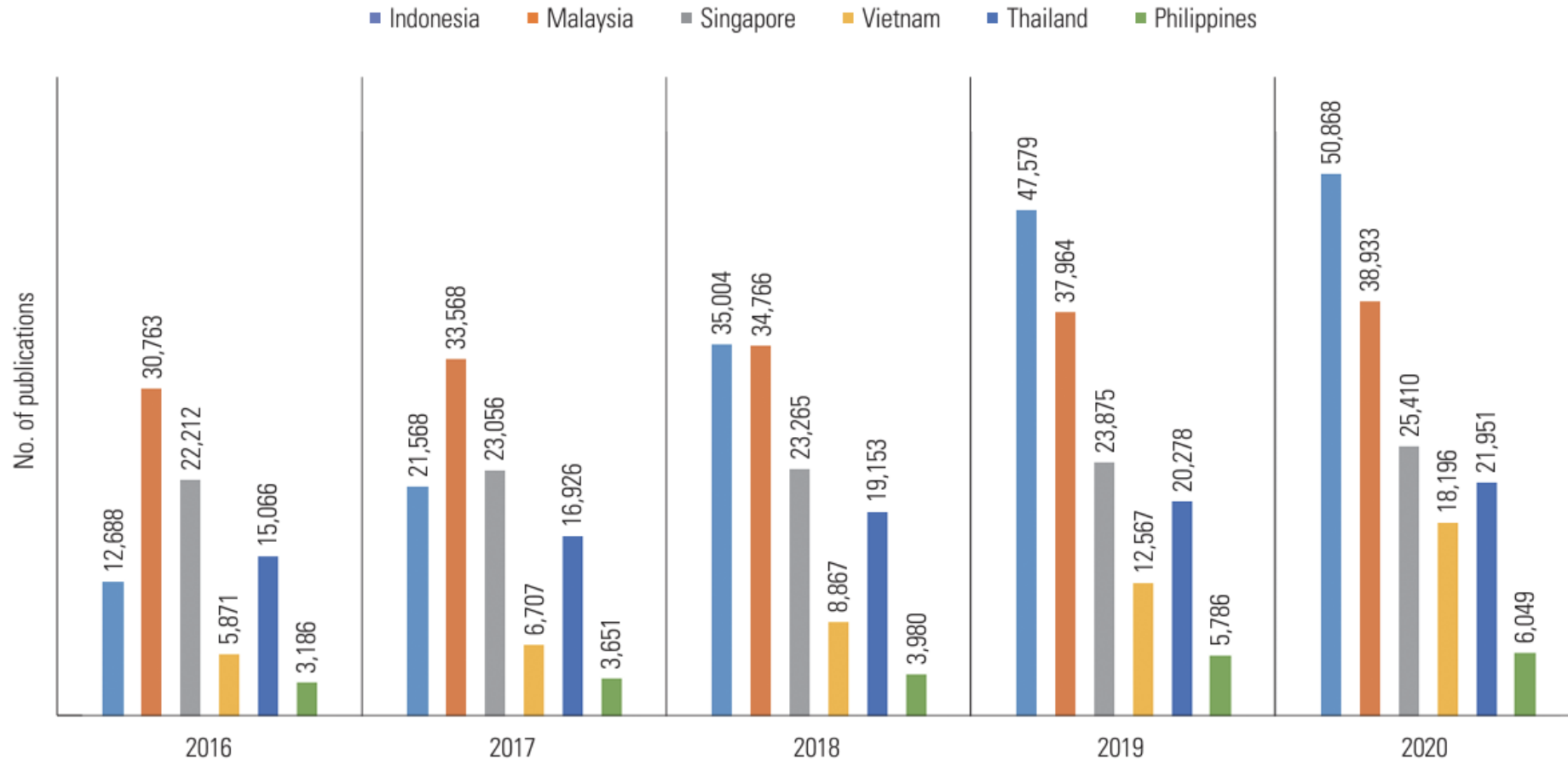
Status of science journals in Asia

- It is a matter of pride that several science journals from Asia are indexed in the Web of Science and SCOPUS.
- There has been a noticeable increase in number of science journals published from Asia and, by extension, number of papers over the years.
- Scholarly climate in the sciences in Asia continues to be bright
- More international authors are publishing their papers in Asian journals in the sciences.
- More citations are accruing from Asian authors.

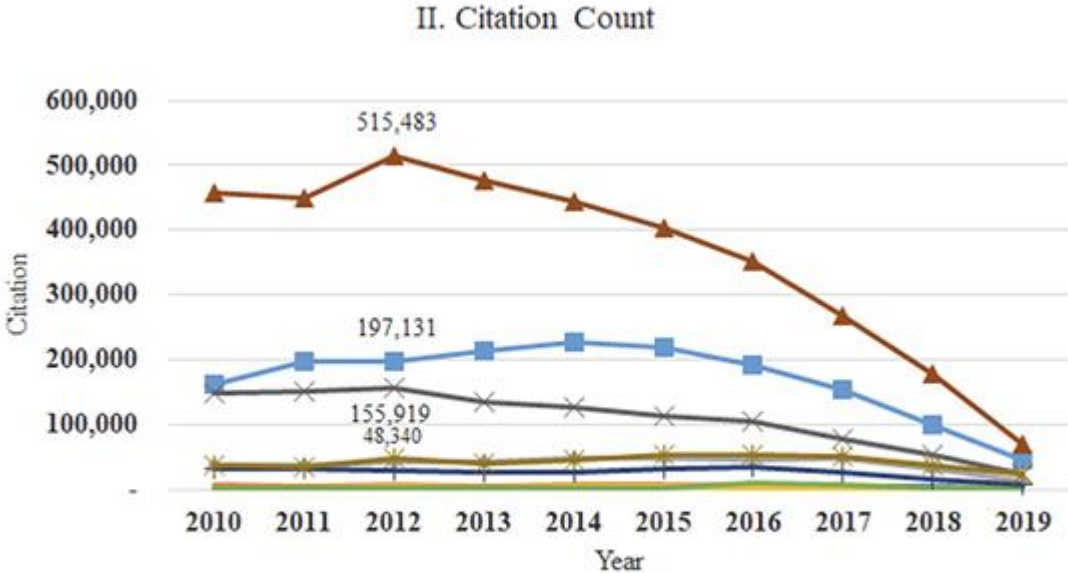
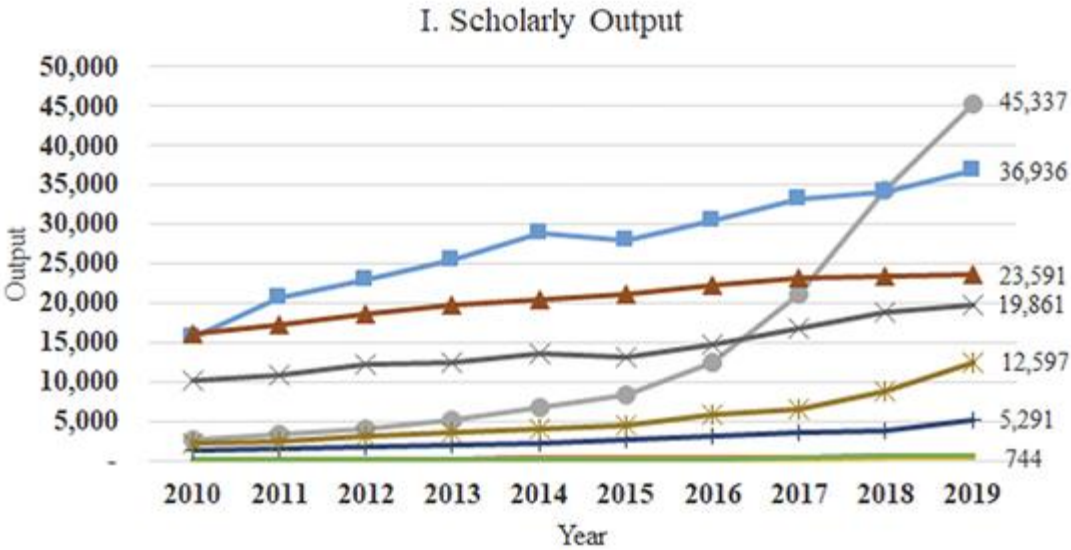
Asian journals listed in Web of Sciences Science Citation Index Expanded + Social Sciences Citation Index by country based on Journal Citation Report 2015.



Comparison of international publications with ASEAN countries from 2016 to 2020



Publications (I) and citation (II) of ASEAN member countries 2010–2019.



- Brunei Darussalam
- Cambodia
- Indonesia
- Laos
- Malaysia
- Myanmar
- Philippines
- Singapore
- Thailand
- Viet Nam

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Development of Asian scholarly journals in JCR

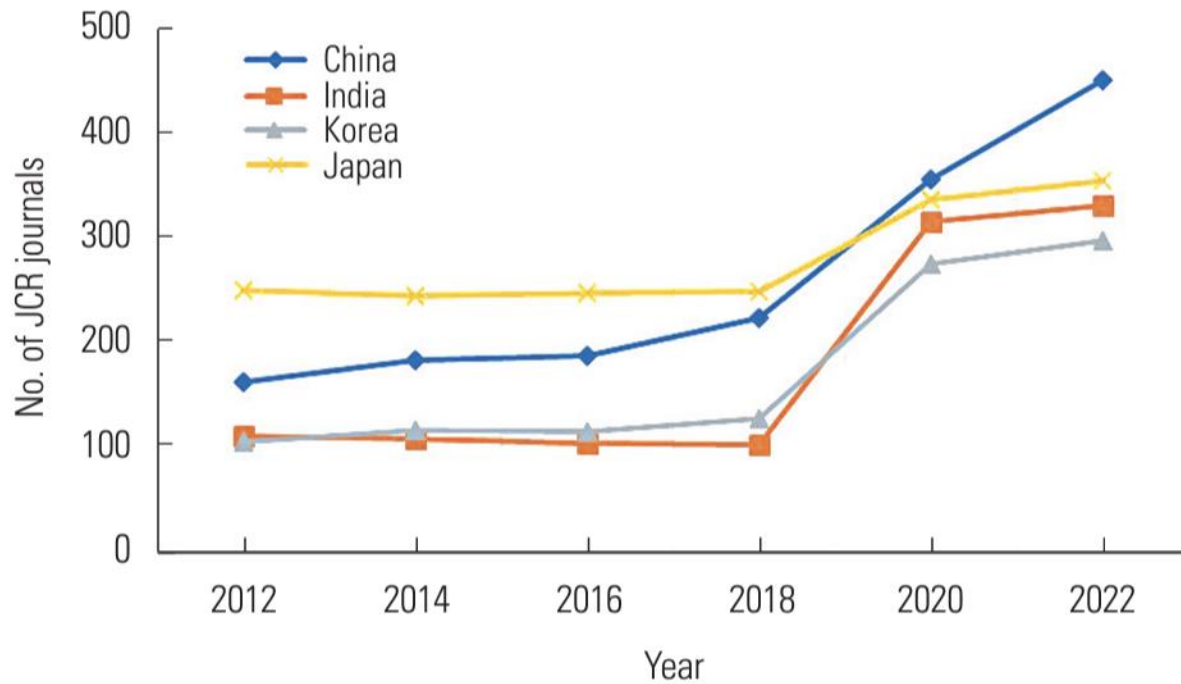


Fig. 1. Number of Journal Citation Reports (JCR) journals of the top four Asian countries (2012 to 2022 biennially).

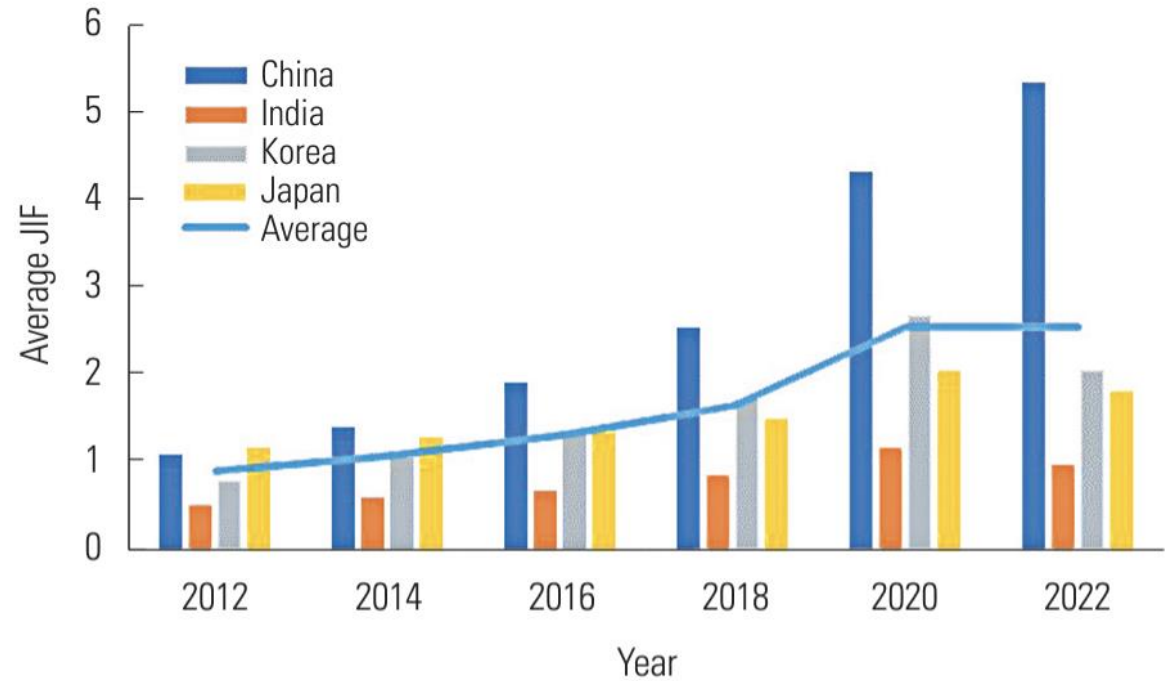


Fig. 2. Average journal impact factor (JIF) of the top four countries in Asia (2012 to 2022 biennially).

Challenges faced by Asian science journals

- Many Asian science journals have not yet achieved the desired recognition in terms of impact factors, citation counts and cite scores.
- Based on my observations, this can be traced to a few factors:
 - (a) Research projects in the sciences generally require good funding, and this is an impediment for producing good quality work that is publishable from developing countries in Asia.
 - (b) Owing to relatively low impact factors of journals or those not yet indexed in major scholarly databases, it is not easy for the journals to attract submissions from international scholars.
 - (c) Several journals are published in the vernacular languages, which restricts the reach of these articles to international audiences.

Challenges faced by Asian science journals (cont'd)

(d) Ecosystem for development of journals has not yet matured to significant levels – for example, composition of editorial boards, pool of competent reviewers, copy-editing services, links with academic publishers or scholarly societies, funding support, support from stakeholders, and journal format (print vs online).

Case of Science Editing journal

- Science Editing journal, published by CASE, offers a good example of how confluence of key factors have made it to the ranks of international journals in a short span of time.
- Some of these factors include visionary leadership of the Executive Board of CASE as well as Editorial Board of Science Editing since inception, diverse members drawn for the Editorial Board, modest funding, ability to carve a niche for itself in the publishing landscape, emphasis on quality and focus on breadth & depth in exploration of issues relevant to its mission in the articles.

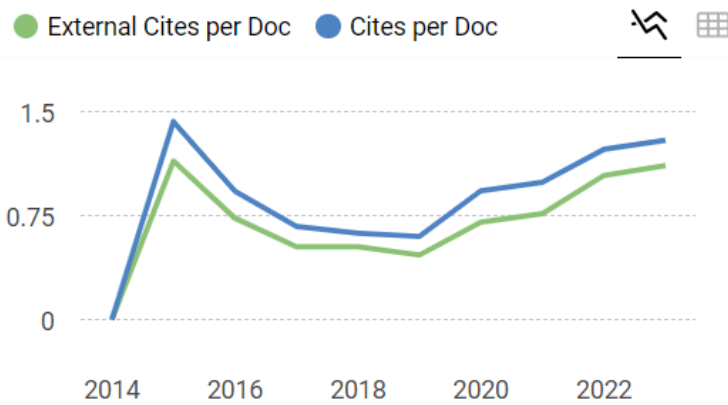
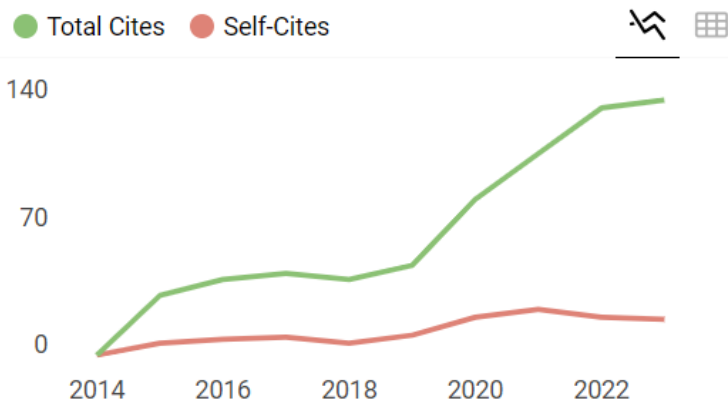
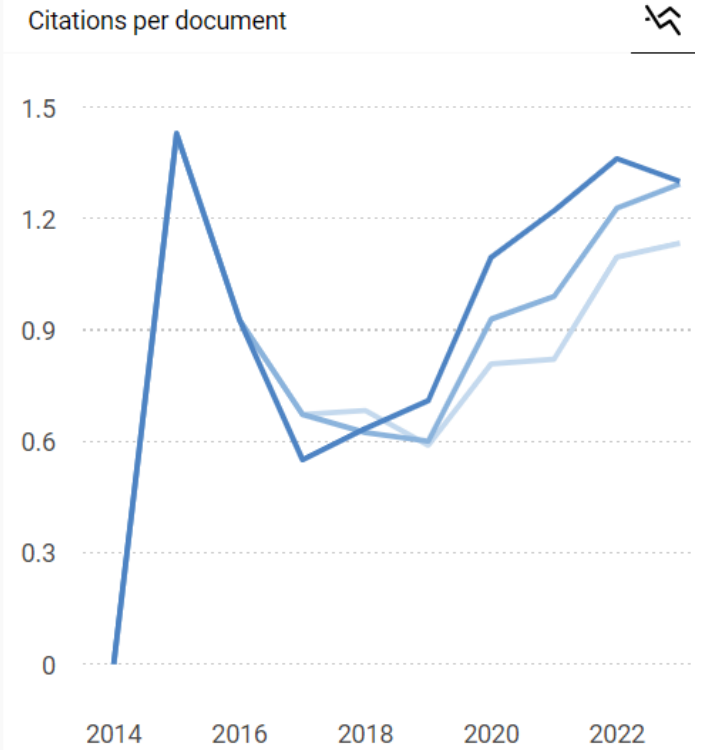
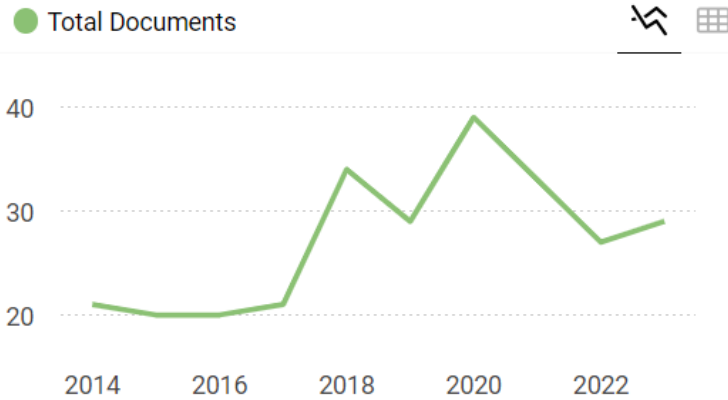
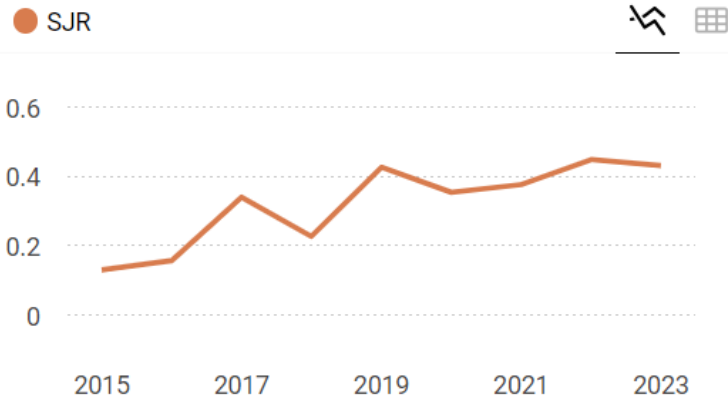
Case of Science Editing journal (cont'd)

- The journal is now indexed by Science of Web and Scopus, among other databases.
- It has an impact factor of 1.6 and is classified as Q2 journal, which is a matter of pride for the leadership of CASE and Science Editing since its founding.
- It continues to attract good quality submissions from international authors and is well positioned with respect to other journals in its genre.

Science Editing

Quartiles

Communication



Science Editing journal(cont'd)

- It would be great if the editors of Science Editing (both past and present) could conduct a case study research on the success of Science Editing journal and publish the findings in an international journal. There are points of interest for other Asian journal editors from such an effort.



Some suggestions to raise the status of science journals in Asia (cont'd)

- The best scientists in the respective science disciplines in the country must helm the journal.
- Have an international editorial board – it gives more clout and buy-in when others wish to associate with the journal.
- Dedicated editorial board members are important; renewal of editorial board members is also important.
- Build up a pool of good reviewers.
- All manuscripts must have at least two reviewers.

Some suggestions to raise the status of science journals in Asia (cont'd)

- Acceptance rates should not be high but modest.
- A small number of papers in each issue can be in the vernacular language but their abstracts need to be in English.
- There needs to be a good mix of papers from local and international institutions.
- Do not restrict only to research published by local academics – encourage those from the region and other countries to also submit manuscripts.

Some suggestions to raise the status of science journals in Asia (cont'd)

- Open-source software has evolved to an extent that it is possible to configure an e-journal format with searchable features and hosting of issues at relatively low cost. The right IT person can make a difference in managing this.
- Set a time frame to get into Web of Science and SCOPUS.
- Link up with local tertiary institutions to source for manuscripts in the sciences – this can motivate doctoral students and early career researchers to build up a publication portfolio.
- Important for editors to network and source for quality submissions.

Some suggestions to raise the status of science journals in Asia (cont'd)

- As far as possible, publish the journal in English so that its outreach can be enhanced.
- Have a regular publication schedule – at least four issues per year, and with each issue containing a good number of papers.
- Go for open access publishing or online format – it saves the hassle of mailing copies and storing hard copies. In fact, open access journals are increasing in numbers in Asia.

Development of Asian scholarly journals in JCR

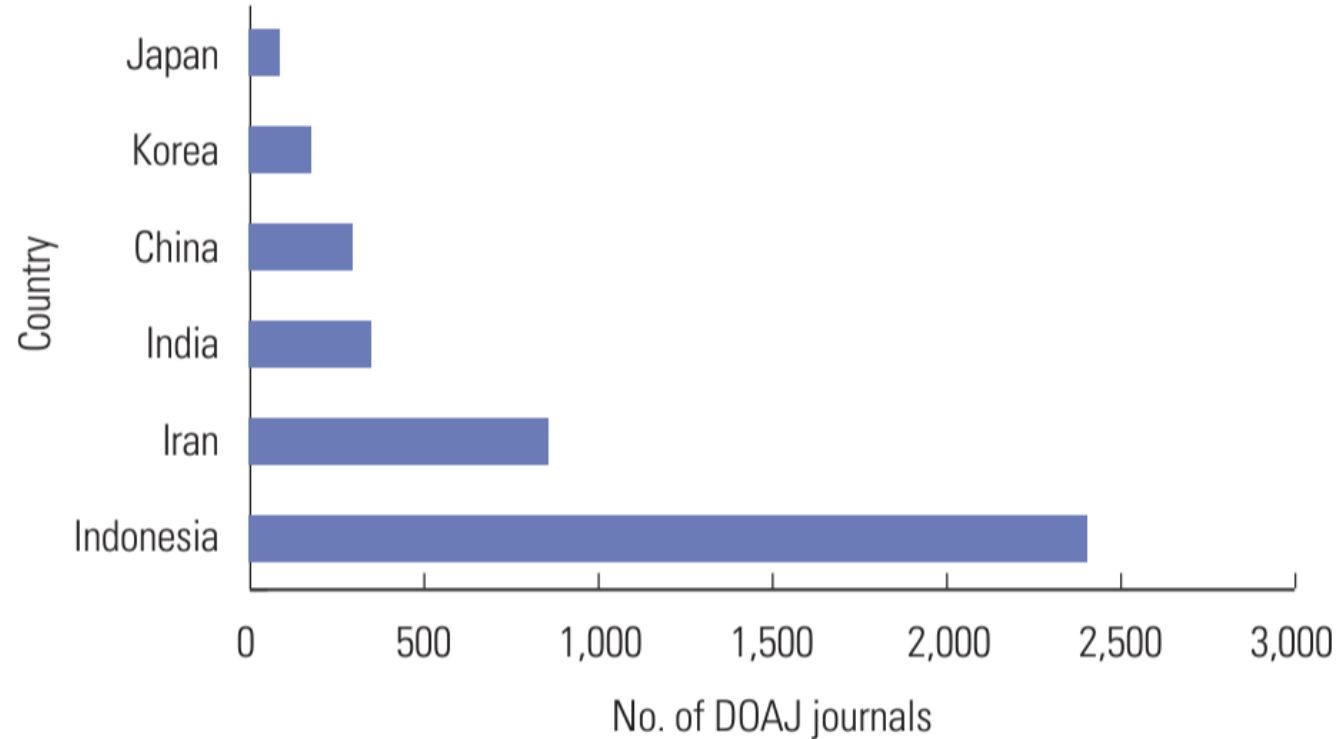


Fig. 3. Number of Directory of Open Access Journals (DOAJ) journals of the top six Asian countries (as of February 1, 2023).

Some suggestions to raise the status of science journals in Asia (cont'd)

- Ideally each scientific discipline – for example, physics, chemistry, biology, mathematics and the various fields of engineering would need a local journal to cater to the needs of faculty in local tertiary institutions as well as reach out to others. If there is none, it would be good to start one soon.
- Once the journal has reached a certain track record– for example, 5 years or so, invite an overseas academic to co-edit a special, issue of the journal with a local academic.
- Ideally, local journals must aim to transition to international journals within a certain number of years.

Some suggestions to raise the status of science journals in Asia (cont'd)

- More efforts to publish international journals are required for Asia to increase the number of citations as well as boost capacity building in tertiary education.
- Link up with CASE – they have domain expertise, track record and experience to help you with your journal. CASE has also been conducting workshops and webinars related to aspects of journal publishing over the years.
- Collaborate with global academic publishers.

Top 10 publishers in the East Asian countries

V: Global commercial publishers

Publisher	NO. OF journals		
China		South Korea	
V Science Press	90		Techno-Press 14
Chinese Medical Journals Publishing House Co, Ltd	43	V Springer Nature	5
AME Publishing Company	32	V Elsevier	4
KeAi Communications Co	31		Korean Institute of Electrical Engineers 3
Higher Education Press	17		Korean Institute of Metals and Materials 3
V Springer Nature	16		Korean Society of Mechanical Engineers 3
Chinese Academy of Sciences	14		Korea Distribution Science Association (KODISA) 2
Zhonghua Yixuehui Zazhishe/Chinese Medical Association Publishing House	11		Korean Association of Medical Journal Editors 2
Tsinghua University Press	8		Korean Dermatological Association 2
Science in China Press	6		Korean Mathematical Society 2
Japan		Taiwan	
V Springer Nature	51	V Elsevier	8
The Institute of Electrical Engineers of Japan	7		Tamkang University 7
V Elsevier	5		National Taiwan Normal University 5
Kyoto University	5		Academia Sinica 4
Kyushu University	5		National Taiwan University 3
Maruzen Co, Ltd/Maruzen Kabushikikaisha	5		Academy of Taiwan Information Systems Research 2
V Wiley-Blackwell	5		National Cheng Kung University 2
Fuji Technology Press	4		National Taiwan University of Science and Technology 2
Igaku-Shoin Ltd	4	V Springer Nature	2
Architectural Institute of Japan	3		Taiwan Association of Engineering and Technology Innovation 2

Conclusion and summarizing remarks

- Science journals in Asia continue to serve an important role.
- Outlook of science journals in Asia looks bright.
- There is likely to be the evolution of more journals in the sciences in Asia. This is to cater to the varied disciplines and also to meet the challenges of capacity building in the scholarly front.
- More Asian journals are likely to be inducted into the Web of Science and SCOPUS.
- The ecosystem for scholarly publishing will continue to improve.
- However, there are challenges ahead that need to be met.

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Thank you.

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