## Open access debates in Indonesia

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Albeit producing smaller number of research output, the growth of open access scientific journals in Indonesia has shown a massive upsurge compared to the European or North American countries. Despite the absence of state-policy that explicitly mandates for opening access to scientific literature, most Indonesian journals are in favour of the open-access model. In this article, we discussed the possible reason why open access could grow on such an unprecedented scale as well as a number of ongoing debates on Indonesia’s publishing system. We also briefly reviewed and compared Indonesia’s open access landscape to a number of open-access policies implemented in other regions.
Open access debates in Indonesia

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All are members of the Indonesia Open Science Team

Abstract

Albeit producing smaller number of research output, the growth of open access scientific journals in Indonesia has shown a massive upsurge compared to the European or North American countries. Despite the absence of state-policy that explicitly mandates for opening access to scientific literature, most Indonesian journals are in favour of the open-access model. In this article, we discussed the possible reason why open access could grow on such an unprecedented scale as well as a number of ongoing debates on Indonesia’s publishing system. We also briefly reviewed and compared Indonesia’s open access landscape to a number of open-access policies implemented in other regions.

Key words: open access, Indonesia, publishing system, research output

INTRODUCTION

An unpublished study conducted by Piwowar (Noorden, 2019) that tracked OA-licensed articles and searched other legally-free access articles through institutional repositories and linked these articles to its respective research institutions and countries, found that authors affiliated with institutions taking place in developing countries, were commonly made their scientific papers openly-accessible. The proportions of open access (OA) articles in the third-world countries, such as Nepal, Peru, Uganda, and Kenya were significantly higher than prominent European countries, such as United Kingdom and Croatia. Indonesia is also leading in OA charts among these countries as Noorden (2019) noted that there is an upsurge of local OA journals registered in CrossRef and indexed in Directory of Open Access Journals (DOAJ). The fact that developing countries are mostly outperforming the Global North is rather surprising because
OA movement in the Global South is often severely overlooked.

Indonesian scientists are mostly au courant to OA journals and OA culture is deeply embedded in the Indonesian research ecosystem (Irawan et al., 2018). It is, therefore, reasonable that scientific journals in Indonesia have chosen OA mode since its initiation. Some indeed started with a conventional subscription mode for their members but flips over the full OA model afterward. Most scientific journals in Indonesia are published by the universities and some of those enjoy financial support from the government so that its business model does not rely on article processing charges or subscription fees. In other developing countries, such as Latin America, this is also the case so that OA model of the scientific journals are more sustainable than major commercial publishers in the Global North. Despite the fact that Indonesia has successfully moved its publishing system and research infrastructure to a more open, shared-environment, research performance assessment still grossly relies on citation-based metrics.

This paper aims to examine how the status of OA publishing in Indonesia and the debates circling around it, especially two main issues namely the peer review process and the question on the quality control of the publication cycle.

**THE RESEARCH STRENGTH OF INDONESIA**

The growth of scientific journals in Indonesia is largely unprecedented and almost all are OA. There are in total 1561 scientific journals (November 14, 2019), ranked second in the DOAJ database (DOAJ, 2020). The majority of these journals are managed by universities, research institutes, and professional associations. This tradition is then continued in the era of online journals. However, recently there are indications that several journals from associations or universities have been managed by commercial publishers (Brill, 2016a, 2016b). In addition, Indonesia also has 121 institutional repositories in Indonesia, according to DOAR (2020), located in at least five main islands. The number of repositories is still very small if compared to the number of universities in Indonesia which are 3,366 institutions (only includes: universities, institutes, and colleges).

Following this condition, Indonesia should not have a problem with open access. But conversely, this positive conditions towards openness are impeded by citation-based regulations. The journals shown in Figure 1 are 10 journals out of 58 indexed in Scopus database (Scopus, 2020) and Scimago Journal Rank (Scimago, 2020). They started to build a good
citation record after being listed in the database. However, we have not had any study to reveal who cite them (whether those are mostly cited by Indonesian or international authors), and whether it is necessary for the journals to publish the articles in English, if most of the readers are Indonesians.

Figure 1 The 2018 SJR score, the duration of Scopus indexing, and the number of Scopus indexed papers from 10 Indonesian journals in STEM, social science, medicine and business fields (link to chart and dataset https://www.datawrapper.de/ /4o4ao/)

A massive random survey using internet technology (“nano-survey”) in 2014 by the World Bank (Samuel S. Lee, 2014, p. 2) showed that 43% of the more than 3,000 Indonesian respondents were familiar with the term “open data”, 56% wanted to access financial information that is public, and 30% have used it, and 40% of respondents know how to access information about public financing and services. Apparently, this is the first largest survey of open access in Indonesia, and shows that literacy regarding open access and access techniques have been shared by some Indonesians.

The facts above are not surprising because one of the most widely known Indonesian characters is openness (Malihah, 2015). In fact, the Pancasila (Swati Chopra and Yamini Chauhan, 2013) (The Five Principles---i.e. “the belief in one God, just and civilized humanity, Indonesian unity, democracy under the wise guidance of representative consultations, and social justice for all the peoples of Indonesia”) which forms the basis of the Indonesian state, is known as an open ideology (UKEssays, 2018). The nature of open ideology is that “the values and ideals are not imposed from the outside, but are taken up and taken from the wealth of spiritual, moral and
cultural community itself … Opened ideology ... is dynamic and reformist.” Thus, open access in Indonesia has fundamental values.

If there is a practice of “open access” which, for examples, actually reduces democratization in Indonesia, or further widens the gap in social injustice between those who do not have and those who have socio-economic privileges, then such “open access” is contrary to Pancasila, or not desired by the people of Indonesia. As stated by King et al. (2016), “The development of a shared, open ideology as a guiding principle for a particular research project carries with it a set of legal, technical and operational imperatives.” Openness is not for the sake of openness itself, but there are underlying values, which guide the practice of openness. This is in line with what was revealed by Piron (2017),

“While traveling to West Africa, I was disappointed to discover that the geographers of Ougadougou (Burkina Faso) knew the European science on the Sahel better than the work of the Higher Sahel Institute in Maroua (Cameroon) which is not online, even less in open access. Indeed, African science can be found less in scientific articles published in journals from the North than in dissertations and master's theses carried out in the universities of the Global South .... Therefore, open access in Africa should adapt to this reality and focus on good-quality institutional archiving, instead of publication in globalized/Northern journals.”

In the perspective of Pancasila, open access which is the subject of Piron's disappointment is a type of open access that is contrary to social justice in terms of knowledge dissemination. Piron expressed it as follows, “Open access can become a tool of neocolonialism if it only give students and academics better access to science form the North.” Meanwhile, what is suggested by Piron (good archiving) is the type of open access that is useful to overcome the social justice gap. Indonesian people want the implementation of open access based on values that bring wellbeing and welfare for its communities.

In addition to that, seeing knowledge as a common good and a form of social support is also deeply entrenched among Indonesians (Mangundjaya, 2013). As a collectivistic society, Indonesians rely on their in-group as a basic unit of survival and knowledge is long seen as a common good and keep it as a private property would lead to social exclusion (Goodwin and
Giles, 2016). Apart from the use of public funding to build research ecosystem, collectivism might be also the important feature why OA model is massively successful in Indonesia.

MAJOR OPEN ACCESS POLICY

In this section, we compare and give a brief review of Indonesia’s open access policy to other similar policies, namely Plan-S, AmeliCA and GLOALL.

Plan-S

Plan-S is a policy initiated in September 2018 by the Coalition-S consortium, and the consortium consists of 24 research funders (Science Europe AISBL, 2020). This policy contains 10 principles.

Plan S requires publicly funded research to be freely accessed by the public, under three mechanisms:

1. open access journals (gold OA journals),
2. open access repository (green OA), and
3. other open access platforms.

However, even though Plan S recommends three OA routes, there are many concerns that the policy will further highlight the role of commercial publishers, especially with the pressure for academics to publish their research in prestigious media (e.g. journals with high impact factor).

Among the 10 Plan S policies are appeals that do not use mainstream metrics as the only indicator to assess the performance of researchers. Similar appeals, such as DORA (2012) and the Leiden Manifesto (2015), were enacted long before, but it seems that not many institutions have published their alternative indicators.

We are sceptical that Plan S fits anywhere in the Global South since allocating state budget to cover APCs imposed by commercial journals is implausible considering (already) limited available resources. Plan S is criticised for being too Eurocentric and overly accommodative to the interest of commercial publishers. Rather than imposing journals to lower or waive their subscription fees so that it is more affordable, Plan S allows commercial publishers to apply fees as much as they like. For Global South researchers, Plan S will bring more harm than good as it would be further widening the gap between the Global South and North. After Plan S takes
its effect, it would be easier to access scientific literature but it would be even harder for researchers in the Global South to publish in them (Poynder, 2019b).

Now what is the effect on Indonesia or other southern countries? Our prediction will be big. Why? Because these countries have a tendency to imitate any policies issued by western nations. If Indonesia applied a similar regulation, more state funds would flow to foreign publishers, because Indonesian researchers are still under pressure of the academic promotion regulation which still relies entirely on conventional metrics.

**AmeliCA**

AmeliCA was first declared in August 2019 as a communication infrastructure for publicizing academic activities openly (AmeliCA, 2019). Amelica itself is preceded by another initiative, Redalyc, a network of scientific journals from Latin America, the Caribbean, Spain and Portugal. Eduardo Aguado-López and Arianna Becerril-García started Amelica in response to financial problems and the current system of academic recognition that does not favor the Global South countries.

AmeliCA (2019) carries ten main principles and values in essence three things: (1) that publicly funded research is common goods that must be returned to the public. The social impact of science is the foundation of open access. (2) For this reason, various research media publications resulting from research must maximize digital age communications operated by the non-profit model. All infrastructure investment must bring benefits to the community. (3) That the scientific world is very diverse, therefore measurements of research performance that prioritize uniformity must be stopped.

AmeliCA (2019) has 3 (three) three-dimensional strategies to move towards openness: *First*, deconstructing (dismantling and rebuilding) the current system (the recruitment process and promotion of academic positions) which is oriented to prestige. *Second*, build infrastructure. *Third*, establishing journals that are non-profit and academy-owned as substitutes for journals established by the oligopoly system of commercial publishers. These three strategies need to be carried out jointly by various actors, namely funders, universities, and decision makers. Arianna Becerril-García (Poynder, 2019a) revealed the following quote,
“We can deconstruct what we know does not work and we can decide what the engine is needed to further the agenda and work of researchers. And we can be more creative in planning how to distribute resources.”

AméliCA seems to be more in line with Indonesian conditions. However, joint funding between institutions is also not easy to do. Each institution may have a different open access agenda and objectives.

**Global Alliance of Open Access Scholarly Communication Platforms (GLOALL)**

The next is GLOALL (UNESCO, 2019) which has not been widely publicized. GLOALL stands for Global Alliance of Open Access Scholarly Communication Platforms which was declared by the United Nations on April 12, 2019. The three main things highlighted in this movement are inclusivity, democratization of scientific knowledge, and knowledge as a global public good, which is directed towards achieving Sustainable Development Goals (SDG) (United Nations, 2015). This initiative then created a Global Open Access Portal (GOAP) (UNESCO, 2017).

**Some remarks**

These three open access policies form two streams. The first stream is more focused on media publications in the form of scientific journals and the second stream is more focused on the preparation of communal infrastructure financed and facilitated by the state. The table below illustrates the comparison between the two policies and conditions in Indonesia.

Table 1 Comparison of open access policies and conditions of publication ecosystems in Indonesia

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<thead>
<tr>
<th>Characteristics</th>
<th>Plan-S</th>
<th>AméliCA</th>
<th>GLOALL</th>
<th>Indonesia’s current settings</th>
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<tr>
<td>Main initiator</td>
<td>Research funders</td>
<td>Academic communities of some countries in Latin America</td>
<td>UN in a consortium of several organizations (AméliCA, AJOL, Érudit, J-</td>
<td>The state (via The Ministry of Research, Technology, and Higher Education)</td>
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### OPEN ACCESS DEBATES IN INDONESIA

#### Issue 1: Open access vs APC

A widely-believed misconception about OA in Indonesian researchers is that if one wants to publish papers with the open access route, he/she has to pay APC. The only route understood is

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<th>Main funding sources</th>
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<tr>
<td>Components to be funded</td>
<td>Research activities and OA publications in academic journal</td>
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<td>Research activities and OA publications in “reputable” academic journal (based on Scopus/WoS indexing and Scimago Journal Rank)</td>
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<td>OA main route</td>
<td>Via academic journals: gold OA route with capped APC and diamond OA route (no APC) or Via non-profit or institutional repository (Green OA route)</td>
<td>Via academic journals: diamond OA route (no APC) or Via non-profit or institutional repository (Green OA route)</td>
<td>Combined policies from each member of consortium</td>
<td>Via academic journals: gold OA route APC and Scopus/WoS indexing as an indicator of quality.</td>
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Gold OA without any regard to the possibility of publishing scientific research through Green or Diamond OA (Tennant et al., 2019).

According to them, the higher the APC was considered related to the better quality of journals, especially those published in Europe and the United States. But the above opinion does not apply to journals published in Eastern European countries, India and the surrounding area. Uniquely, the opinion that Gold OA is the only route for OA, contradicts the fact that 70% of Indonesian journals do not ask for APC. This misconception implies a motivated reasoning and perhaps somewhat related to the stereotypes of the Western world - anything that is written in English and published by Western commercial publishers are cues to high-quality publication.

Especially for Green OA, although there is awareness from universities to archive theses and dissertations in campus repositories, but they have never recognized it as a Green OA activity. Many of them also do not know that they can archive journal manuscripts to the repository.

The Figure 2 below shows a comparison of the publication routes of Gold OA, Green OA, and non OA. Whatever route is chosen (Gold OA or non OA), the impact will be the same. The institution/country is the one who pays the most costs and the publisher is the one who receives the most benefit.

![Figure 2 Several publication routes and their financial impact](https://via.placeholder.com/150)
Issue 2: Open access vs academic prestige

Indonesian government is notoriously well-known of delivering inconsistent policies. Although OA (local) journals is ubiquitous, OA principle is also somewhat conflicting with publication regulations issued by the government. Faculty performance and promotion system is centralised in the Ministry of Education (before 2020, Directorate of Higher Education was under the Ministry of Research, Technology, and Higher Education). They determine all requirements and even directly assess associate professor and full professor candidates. To obtain promotion, a tenured faculty has to publish in a “prestigious” outlet. Academic prestige mainly refers to journals indexed in “prestigious” databases, such as Scopus or Clarivate Analytics.

Publication regulations and staff performance measurements in Indonesia are still very much based on mainstream metrics that are solely determined by the world's major commercial publishers. This causes the desire to open access to research results again collided with APC prices. This causes the orientation of the researchers to OA only focused on commercial journals with high APC. As many as 70% of the world's OA journals in the DOAJ database that do not request the APC are considered not exist. Even so, this performance assessment tends to undermine the OA culture as a strength of Indonesia’s research ecosystem.

The question about research quality is also missing in the national discourse. To fulfill publication pressure, researchers are often forced to compromise the quality of their research in order to get their research published. However, the demand to conduct credible research has been intensified and the government is actively building infrastructure to accelerate research quality, such as a National Scientific Repository (Repositori Induk Nasional - RIN) (Dzulfikar, 2019). Encouraging researchers to adopt good research practices by imposing transparency, however, still a long way to go.

Issue 3: Open access vs scooping and data abuse

The internet makes the dissemination of ideas and information effectively and efficiently. However, has this changed the way a scientist works? Apparently not. Researchers because regulatory demands are still focused only on publishing papers in journals (related to issue 1 and issue 2). Because of regulatory requirements, most research cannot be formally published. For such cases, researchers also do not yet have the awareness to do independent filing in their institutional repositories because they are afraid of data and research results being “stolen” by
other parties and then published in journals (Tennant et al., 2019). This reasoning cannot be proven with data, how many incidents of theft of ideas, data, and information have occurred.

Indonesia’s Open Data Score is still below the average (Chuah and Loayza, 2017). Although accessibility of data has been found to be empirically correlated with research productivity at the country level, a number of countries, including Indonesia, are still struggling to formulate the level of data disclosure, in particular being aware of the unintended consequences of data disclosure. Indonesia already has a Law on the Openness of Public Information (UU 14/2008) (Presiden Republik Indonesia, 2008) and its derivatives (Satu Data Indonesia, 2017) that encourages open access to data held by government agencies and has important significance for the wider community. Indeed, there are reports about the misuse of public data in Indonesia. Ardiansa (2019) stated that data abuse can be suppressed if the public is involved in giving meaning and criticizing the data. That is, openness of data is not inherently good or bad; rather, the social processes that accompany openness need to be created to facilitate the goal of good openness. What is clear, openness is a step forward as a condition towards the common good.

### Issue 4: The importance of national open access policy

Unlike other countries, the importance of open access policy is still not fully addressed, because policy makers are still focused on increasing number of Scopus indexed publications with the hope that it would increase the position of Indonesian universities in the world-class universities league table. The 2019 National Science and Technology System Law indeed states that the results of research must be accessible to the public, but never set the technical details. This is rather interesting as we can safely conclude that OA movement in Indonesia is a more bottom-up trend and widely adopted as a grassroots initiative rather than an outcome of a top-down policy.

On the other hand, the bold initiative of Documentation and Scientific Information Centre (Pusat Data dan Dokumentasi Ilmia - PDDI), National Institute of Science (Lembaga Ilmu Pengetahuan Indonesia - LIPI) as the largest research institution in Indonesia, to create a National Scientific Repository (RIN) (Lembaga Ilmu Pengetahuan Indonesia, 2019) deserves respect and implies a major breakthrough in OA movement since the availability of such infrastructure is still unknown in other South East Asian countries. However, convincing researchers to make use of the infrastructure is still a daunting task (Dzulfikar, 2019). Open
access is only seen as a publication mode and has not been seen as a way to guarantee research accountability.

The absence of a policy that aims to systematically improve the quality of publication cycle seems to be the biggest challenge. As the system only recognises traditional metrics as a cue to quality, it is hard to convince the policy makers that such metrics are open to abuse (Rochmyaningsih, 2019). There is a deep concern that Indonesian journals have not been fully successful in providing exhaustive peer-review process, not to mention the questions on replicability of research findings. There is also a strong resistance to open peer-review model while it could be a promising solution to tackle the difficulty in finding reviewers.

CONCLUSION

Here we can see that Indonesia as well as countries belonging to the Global South group will only be followers of the policies made by Global North countries. This condition will only bring multiplied losses to Indonesia. It is feared that the aspiration to improve the quality of research and accountability will not be achieved. The globalisation of research and higher education is still seen as a uniform of indicators and criteria, not as a way to show diversity.

In the midst of academic policies built on mainstream metrics, Plan S will only further strengthen the arguments linking quality with high APC prices. This would be contrary to the Indonesian Open Science Movement campaign which prioritizes the independence of research and publications to free knowledge. A main challenge in Indonesia is improving the quality of research output so that campaigning OA should not be seen as the end of a journey, but rather as an entry point to build a more credible and accessible science.

Contributions

DEI: formulation of ideas, data, and editing
JA: formulation of ideas, data, and editing
RAZ: formulation of ideas
IAR: editing and graphic
EKA: editing, bibliography

Conflict of interest declaration

All authors state no conflict of interest upon the publication of this manuscript.
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Figure 2 Several publication routes and their financial impact (Irawan, Abraham and Kiramang, 2020)
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