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## Open access policy

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### Abstract

Scholarly communication as a social activity needs rethinking since this process is in the monopoly of commercial publishers. Authors and their institutions as well as librarians had been working to achieve unrestricted access to research output. In this regard, many researchers around the world gathered in Budapest on February 2002 to decide on global access to publications free of legal and price barriers. This campaign leads to issuing the declaration Budapest Open Access Initiative. This global and scientific gathering was the starting point for open access movement. This new paradigm in scholarly communication is discussed in this paper from price, legal, and business approaches. In relation to open access policies, “green and gold” routes as well as new licences in terms of Creative Commons are considered. Finally, I concluded that higher education institutes should provide suitable infrastructure to make researchers’ works accessible to others. At the same time, custodians of higher education have to legislate for new policies to mandate their researchers to publish the outputs in institutional and subject-based repositories.

**Keywords:** open access policy, journal price crisis, journal permission crisis, creative commons, institutional repository, subject-based repository, golden route, green route

### Introduction

Scholarly journals publishing started with establishment of learned societies in the mid of 17<sup>th</sup> century. The Royal Society of London and the French Academy of Sciences are the pioneers of scholarly journal publishing i.e. Philosophical Transactions and Le Journal des Savants, respectively. Learned societies along with scholarly journals increased scientific collaboration between researchers. Universities and learned societies controlled journals publishing before the Second World War. In the course of time commercial publishers found that publishing industry is a profitable business. At the end of 1950s with the setting up of Thomson Reuters (formerly ISI) and universities research policy to enforce academic staffs to publish in journals indexed in ISI, situation changed in favor of commercial publishers and researchers lost gradually their control over their research findings. University and research libraries to meet the information needs of academicians decided to improve their journal collection development. On the one hand, the higher education policy makers wanted their faculty staff to publish in the prestigious journals which manipulated

by a few commercial publishers and on the other, insisted on “publish or perish” especially in Europe. The result was inelastic market. This market boosted the spiral increase of journal price and caused a smaller fall in demand. Consequently, there was no control on journal pricing policy. In this situation Libraries cannot afford to purchase all the journals their academicians demanded and resulted hindering researchers to have access to findings of peers and their own, except subscribers. Suber (2012) called this permission and price crisis. Pricing strategy under monopoly conditions caused journal price growth rate increased above inflation (Fig. 1).

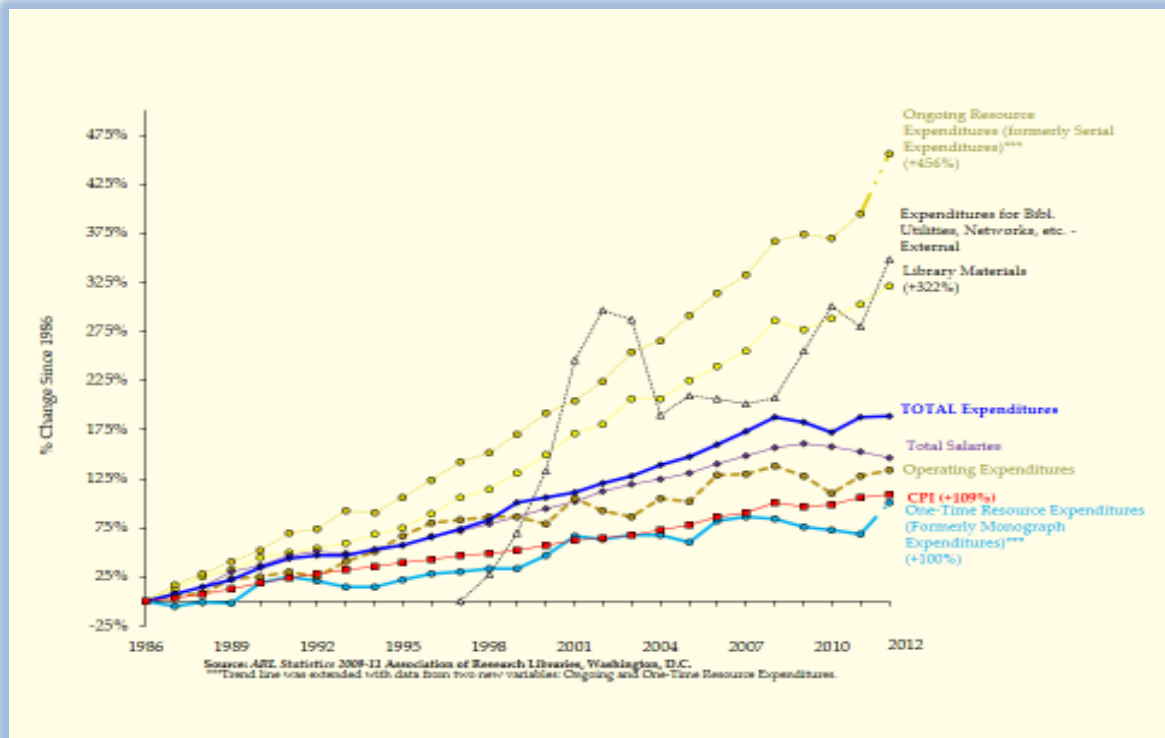


Figure 1. Expenditure trends in ARL libraries, 1986-2012

The advent of Internet (rooted in 1960s) enabled researchers to share their scientific findings with peers. New technologies and the traditional idea of researchers (providing access to the findings for all, everywhere at any time) mixed and the skillful mixture brought about changes in scholarly communication (i.e. Open Access Movement). It is noteworthy that world Internet penetration is more than 40% with world population of 7.3 billion people as of July 2015 according to the medium fertility estimate by the United Nations Department of Economic and Social Affairs, Population Division and 3, 214, 565, 025 estimated Internet users in 30 September 2015 (<http://www.internetlivestats.com/internet-users/>). Totally 45% for Internet penetration rate (<http://www.internetworldstats.com/stats.htm>) show the global tendency of users toward this technology and global information society is making preparations for new environment. Academic staffs as a member of global information society confronted with new challenges as price and permission barriers in scholarly communication.

Researches are of global importance. In this regard, universities are responsible to distribute the research findings of their researchers and provide access to knowledge as widely as possible. To this end, information and communication technologies (ICT) play a crucial role. The higher education institutes should provide suitable infrastructure and implement new policies enable the researchers to make their research outputs open access as well as have access to peers' published works. To achieve this aim, higher education institutes should set out action required. In this regard, they may implement processes and procedures including green and gold routes to open access. In addition to, mandate the academicians to deposit their outputs in an institutional or subject-based repository.

### **Literature Review**

Open access as a new model of research outputs publishing investigated from different approaches. The most controversial issues are economic and licences approaches as well as citation advantages. Regarding citation advantages, Swan's study (2010) showed most researches (27) proved the citation advantages of open access articles up to 2010. Citation rates of open access vs non-open access articles are investigated by Antelman (2004). He concluded that citation rates are increased in open access articles in mathematics (91%), electrical and electronic engineering (51%), political science (86%) and philosophy (45%) indexed in Web of Science. Motivations to make open access publication to increase citation is an issue studied by Bernius & Hanauske (2009). They come to the conclusion the motives behind making articles open access enhance citation rate. Business models of open access journals is in favor of some researches. Article processing cost, advertising, sponsorships, internal subsidies, External Subsidies, and donations and Fundraising are issues studied by Crow (2009). Willinsky (2009) surveyed other economic aspects such as author self-archiving, sponsored open access, delayed open access are investigated and finally suggested “. . . by challenging the need for current levels of economic stratification while seeking to increase the openness with which this public good is cultivated, circulated, and built upon”. Several new copyright models are created concerning open access journals. Hoorn & van der Graaf (2006) result showed the attitudes of authors in UK and Netherlands toward different open access copyright models. Their findings showed that authors believe traditional copyright model should change in favor of academics. Pappalardo et al. (2007) investigated digital repositories from open access policies and copyright licensing of materials deposited into them. To this end, they designed a guide to arrange principles for setting up “a lawful and effective management model” for repositories. Routes to open access is another issue of importance to authors. It is noteworthy that gold route is in interest of authors in some disciplines and some geographical areas (Swan, 2012). Green route is used in digital repositories for author self-archiving. Some authors prefer green route and some other ones gold route, and some advocate both of them (Suber, 2012). In general, open access is noteworthy for its new model of publishing and is interested by advocates in different disciplines. In this regard, commercial publishers also changed their business models.

### Open Access Definition

The definitions of open access focus on the access to the scientific literature without legal, price and technological barriers. Suber (2012) declared “Open Access (OA) literature is digital, online, free of charge, and free of most copyright and licensing restrictions”. Budapest Open Access Initiatives (BOAI, 2002) defines open access as:

By ‘open access’ to this literature, we mean its free availability on the public internet, permitting any users to read, download, copy, distribute, print, search, or link to the full texts of these articles, crawl them for indexing, pass them as data to software, or use them for any other lawful purpose, without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. The only constraint on reproduction and distribution, and the only role for copyright in this domain, should be to give authors control over the integrity of their work and the right to be properly acknowledged and cited.

When authors retain all copyrights in her/his work, documents are free of restricted access for everyone based on copyright licenses. Two other choices are share copyright or transfer it. With regard to copyright transfer, there are two options for traditional journals. First, author transfers all intellectual and commercial exploitation rights to the publisher. Second, authors partially keep intellectual rights and transfer commercial rights to publisher (Hoorn & van der Graaf, 2006). Share copyrights on the one hand guarantees the authors’ moral rights, on the other remove permission barrier, and allow readers to use and reuse the works even for commercial purposes. In this sense, i.e. Creative Commons (CC), “all right reserved” is replaced by “some rights reserved”. CC has created several types of licenses and defined the creative work use for open access journals.

### Creative Commons Licenses

The Creative Commons copyright licenses permit readers to copy, distribute, edit, remix, and build upon the content of previous works, but within the framework of copyright law. Using CC licenses enables the creator to define usage conditions and let authors to change their copyright terms from “all right reserve” to “some rights reserved” (<http://creativecommons.org/about>). The interesting point is that CC licenses “are not an alternative to copyright”. The great virtue of using CC licenses, from the creators’ perspective, is its flexibility to have control over the works. In this regard, the author can easily modify his/her copyright terms to meet the needs. The licenses are as follows.



Attribution CC BY



Attribution-NonCommercial CC BY- NC



Attribution-NonCommercial-ShareAlike CC BY-NC-SA



Attribution-ShareAlike CC BY-SA



Attribution-NonCommercial CC BY-NC



Attribution-NonCommercial-NoDerivs CC BY-NC-ND

All six licenses have some features in common without infringing copyright. The licenses allow others to copy, reuse, redistribute, build upon, and share the content legally. It is noteworthy that users must acknowledge the author. Three CC licenses, CC BY, CC BY-ND, CC BY-SA, let commercial use of materials. Three others, CC BY-NC-SA, CC BY-NC, and CC BY-NC-ND are for non-commercial purposes. The explanations of some attributions are useful for users. CC Noncommercial (NC) is fair use of content and permit others copy, use, display, and perform the materials for noncommercial purposes only. CC No Derivative Works (ND) means that users are not allowed to adapt the original work. In this regard, they can distribute, display, and perform verbatim copies of the work. The last important attribution is CC Share Alike (SA) that means users are allowed to give out “the derivative works under the same the licence terms that govern the original work”(http://creativecommons.org.au/learn/licences/). The significant point in CC licences is that “CC No Derivative Works” and “CC Share Alike” cannot be considered for inclusion in a licence regarding the two licences description.

### Open Access Routes

There are two ways to make research findings open access. These options are gold route and green route. Gold Route recommends a researcher publish in a fully open access journal. Regarding open access journals in addition to fully open access journal, there are Hybrid open-access journals and Delayed open-access journals. Historically hybrid open-access journals back to 1996 (walker cited in Björk, 2012). Making his/her content freely available electronically, author is charged by commercial publishers. In this respect, toll – access journals (subscription journals) policy allows making some articles open access known as Article Processing Charge (APC). Delayed open-access journals as another business model in subscription journals put six to twelve months or more embargo length on free access to journal articles after publishing (Laakso, & Björk, 2013). By self-archiving research outputs in an institutional or subject-based repository open access, green route is achieved. The journal publishers’ policies determine which route you choose to publish your manuscript or deposit in a repository. The SHERPA/RoMEO (2006) Services based at the University of Nottingham inform contributors of publishers’ copyright policies. (http://www.sherpa.ac.uk/romeo/).

Institutions organize open access institutional repositories (e.g. DASH for Harvard University) to preserve digital collection of research outputs created by researchers in higher education institutions (Bailey, Jr., 2008). Subject-based repositories (e.g. ArXiv for Physics) collect contents in a particular subject. In the early 1990’s the first repositories in different disciplines founded (Björk, 2014). In general, digital repositories provide a condition to increase visibility and readership of research findings that bring about more citations and consequently research impact (Johnson, 2002). Furthermore, they bring value to scholarly communication from perspective of content contributors and users (Burns,

Lana & Budd, 2013). Fact and figures in relation to repositories are available in Directory of Open Access Repositories - OpenDOAR (<http://www.opendoar.org/>) and Registry of Open Access Repositories - ROAR (<http://roar.eprints.org/>).

### Discussion

Open access to research outputs as a new paradigm in scholarly communication boosts content availability. Creators' willingness to free access to their findings with the help of new information and communication technologies speeded up this process. Commercial publishers have overcome scholarly communication and seized control of journal publishing. On the one hand, their absolute monopoly on publishing industry leads to price crisis. On the other hand, transferring authors' exclusive right to journals to publish his/her research finding is bargaining chip for commercial publishers that gained a market advantage by leveraging their network of publishing industry overwhelming. The price and permission barriers imposed by commercial publishers on researchers and their university libraries forced them to rethinking scholarly communication. The consequence is open access movement and vary route to make their findings available to anyone, anytime and anywhere without bypassing copyright law.

Open access is a new model of scholarly communication that is free of any legal and price barrier. We should bear in mind that open access journals are not an alternative to subscription journals. They also consider business model. One of the differences between open access journals and toll access journals is that readers do not pay for accessing the contents in the former. However, both models need expenses to survive in competitive era. Although researchers' positive attitudes toward unrestricted access to publications are growing (TBI Communications, 2014; Odell, Dill & Palmer, 2014), they are sensitive about the way others copy, re-use, and build upon their content (van Nardoorn, 2013). Regarding the legal approach, CC licences guide authors to determine their control over their outputs.

### Conclusion

Open access to publications is an issue of importance to stakeholders of scholarly communication. In this regard, readers, authors, research funders, learned societies, and librarians are the strong advocates of open access. But commercial publishers as an important component of this process are in an unsustainable situation. However, commercial publishers soon changed their copyright terms and conditions in favor of open access. The motives behind open access accelerated the growth of this new paradigm in scholarly communication. Higher education institutes should consider the motives and attempt to codify availability to research outputs. Waaijers (2009) listed some benefits of open access as "Corporate Social Responsibility", "Citation advantage", "Advancement of science", "Protection against abuse", "Research transparency", and "Cheap distribution". Research funders as another important component of scholarly communication should set up the infrastructure to provide access to outputs from different channels such as institutional and subject-based repositories. Mandating open access at national or

institutional level is another task of custodians of higher education. Finally, universities need to cooperate and coordinate with other duty holders in relation to scholarly communication to achieve their objectives.

### References

- Antelman, K. (2004). Do open-access articles have a greater research impact?. *College & Research Libraries*, 65(5), 372-382.
- Bailey, Jr., C. W. (2008). Institutional repositories, tout de suite. Digital Scholarship. Retrieved from <http://digital-scholarship.org/ts/irtoutsuite.pdf> (accessed 15 September, 2015)
- Bernius, S., & Hanauske, M. (2009). Open access to scientific literature: increasing citations as an incentive for authors to make their publications freely accessible. Paper presented at the 42nd Annual Hawaii International Conference on System Sciences, HICSS, January 5, 2009 - January 9, 2009. [Online]. Retrieved from:<http://origin-www.computer.org/csdl/proceedings/hicss/2009/3450/00/07-07-09.pdf> (accessed September 25, 2015).
- Björk, B. c. (2014). Open access subject repositories: An overview. *Journal of the American Society for Information Science and Technology*, 65(4): 698-706.
- Björk, B.C. (2012). The Hybrid Model for Open Access Publication of Scholarly Articles – a Failed Experiment? *Journal of the American Society for Information Science and Technology*, 63(8): 1496-1504.
- Budapest Open Access Initiative – BOAI (2002). Retrieved from <http://www.budapestopenaccessinitiative.org/read> (accessed 12 June, 2015).
- Burns, C. S.; Lana, A. & Budd, J. M. (2013). Institutional Repositories: Exploration of Costs and Value. *D-Lib Magazine*, 19(1/2). Retrieved from <http://www.dlib.org/dlib/january13/burns/01burns.html> (accessed 12 September 2015).
- Crow, R. (2009). Income models for open access: An overview of current practice. Retrieved from [http://sparc.arl.org/sites/default/files/incomemodells\\_v1.pdf](http://sparc.arl.org/sites/default/files/incomemodells_v1.pdf) (accessed 3 October, 2015).
- Hoorn, E. & van der Graaf, M. (2006). Copyright issues in open access research journals: the authors' perspective. *M-Lib Magazine*, 12(2). Retrieved from <http://www.dlib.org/dlib/february06/vandergraaf/02vandergraaf.html> (accessed 4 September, 2015).
- Johnson, R. K. (2002). Institutional repositories: Partnering with Faculty to Enhance Scholarly Communication. *D-Lib Magazine*, 8(11). Retrieved from <http://www.dlib.org/dlib/november02/johnson/11johnson.html> (accessed 12 September 2015).
- Laakso, M. & Björk, B.C. (2013). Delayed Open Access – an Overlooked High-Impact Category of Openly Available Scientific Literature. *Journal of the American Society for Information Science and Technology*, 64(7), 1323-1329.
- Odell, J.; Dill, E. & Palmer, K. (2014). Author's rights to share scholarship: A survey of faculty attitudes and actions. Indianapolis: Indiana Library Federation. Retrieved from <https://scholarworks.iupui.edu/bitstream/handle/1805/5932/facultyOAsurvey->

- ILF20141119c.pdf?sequence=1&isAllowed=y (accessed 10 September, 2015).
- Pappalardo, K. M., Fitzgerald, A. M., Fitzgerald, B. F., Kiel-Chisholm, S. D., O'Brien, D., & Austin, A. (2007). A guide to developing open access through your digital repository. Retrieved from <http://eprints.qut.edu.au/9671/1/9671.pdf> (accessed 3 October, 2015).
- SHERPA/ROMEO (2006). Retrieved from <http://www.sherpa.ac.uk/romeo/> (accessed 10 October 2015).
- Suber, P. (2012). Open access. MIT :The MIT Press Essential Knowledge series. Retrieved from: [http://cyber.law.harvard.edu/hoap/Open\\_Access\\_%28the\\_book%29](http://cyber.law.harvard.edu/hoap/Open_Access_%28the_book%29), (accessed 12 March, 2015).
- Swan, A. (2012). Policy guidelines for the development and promotion of open access. UNESCO: France. Retrieved from <https://books.google.com/books?hl=en&lr=&id=ptsR-DIXX-AC&oi=fnd&pg=PA4&dq=Policy+Guidelines+for+the+Development+and+Promotion+of+...&ots=4Bi07WQtxu&sig=eQSWWggHFOCsECmU57UHS2-TuN4#v=onepage&q=Policy%20Guidelines%20for%20the%20Development%20and%20Promotion%20of%20...&f=false> (accessed 3 October, 2015).
- Swan, A, (2010). The open access citation advantage: Studies and results to date. Retrieved from: [http://eprints.soton.ac.uk/268516/2/Citation\\_advantage\\_paper.pdf](http://eprints.soton.ac.uk/268516/2/Citation_advantage_paper.pdf) (access 22 September, 2015).
- TBI Communications (2014). Learned society attitudes towards open access: Report on survey results. Retrieved from [http://www.edp-pen.org/images/stories/doc/EDP\\_Society\\_Survey\\_May\\_2014\\_FINAL.pdf](http://www.edp-pen.org/images/stories/doc/EDP_Society_Survey_May_2014_FINAL.pdf) (accessed 16 September, 2015)
- Van Nardoorn, R. (2013). Researchers opt to limit uses of open-access publications. *Nature*, 6 February. doi:10.1038/nature.2013.12384
- Waijers, L. (2009). A brief overview of international trends in Open Access. Retrieved from [http://www.kb.se/docs/about/projects/openaccess/international\\_trends\\_oa\\_leowaaijers.pdf](http://www.kb.se/docs/about/projects/openaccess/international_trends_oa_leowaaijers.pdf) (accessed 30 September, 2015).
- Willinsky, J. (2009). The stratified economics of open access. *Economic Analysis & Policy*, 39(1): 53-70.